

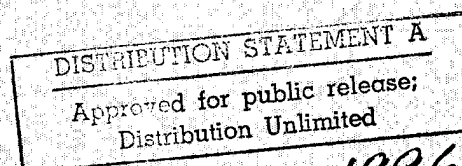
**United States Air Force
611 Air Support Group
611 Civil Engineer Squadron**

Elmendorf AFB, Alaska

**FINAL
Indian Mountain LRRS, Alaska**

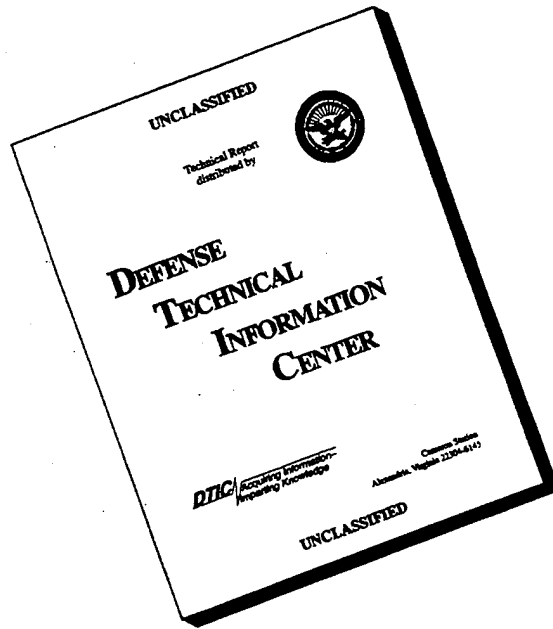
**ADDENDUM TO
REMEDIAL INVESTIGATION/
FEASIBILITY STUDY REPORT
(OCTOBER 1995)**

JANUARY 1996



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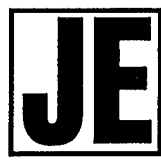
FINAL

Indian Mountain LRRS, Alaska

ADDENDUM TO
REMEDIAL INVESTIGATION/
FEASIBILITY STUDY REPORT
(OCTOBER 1995)

JANUARY 1996

By:



JACOBS ENGINEERING GROUP INC.
600 17th Street, Suite 1100N
Denver, CO 80202

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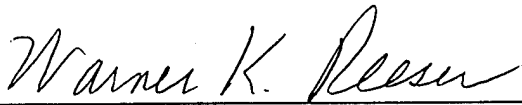
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PREFACE

This Remedial Investigation/Feasibility Study (RI/FS) Addendum describes several tasks completed in 1995 at Indian Mountain Long Range Radar Station, Alaska. Additional site characterization sampling activities and results are presented in this report. These results are evaluated and RI/FS recommendations and conclusions are revised, when appropriate. This work is performed in accordance with the requirements of Contract No. F41624-94-D-8046, Delivery Order No. 0004, between the U.S. Air Force and Jacobs Engineering Group Inc.

The Jacobs Engineering Group Inc. Project Manager for this delivery order is Ms. Sarah Brown. Mr. Samer Karmi of the Air Force Center for Environmental Excellence is the Alaska Restoration Team Chief for this task.

Approved:



Warner K. Reeser
Program Manager
Jacobs Engineering Group Inc.

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LIST OF ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADD	applied daily dose
ADEC	Alaska Department of Environmental Conservation
ARAR	applicable or relevant and appropriate requirement
AWQC	ambient water quality criteria
BTEX	benzene, toluene, ethylbenzene, and xylene
cm ²	square centimeter
COPC	contaminant of potential concern
DRO	diesel range organic compounds
DTIC	Defense Technical Information Center
EPA	U.S. Environmental Protection Agency
GRO	gasoline range organic compounds
IRA	interim remedial action
IRP	Installation Restoration Program
LRRS	Long Range Radar Station
mg/kg	milligrams per kilogram
MOGAS	motor vehicle gasoline
NTIS	National Technical Information Service
PCBs	polychlorinated biphenyls
PCP	pentachlorophenol
POL	petroleum, oil, and lubricants
ppm	parts per million
PRG	preliminary remediation goal
PVC	polyvinyl chloride
RI/FS	remedial investigation/feasibility study
SAP	sampling and analysis plan
SVE	soil vapor extraction
SVOC	semivolatile organic compounds
TAH	total aromatic hydrocarbons
TAqH	total aqueous hydrocarbons

LIST OF ACRONYMS AND ABBREVIATIONS

TRV	toxicity reference value
TSCA	Toxic Substances Control Act
VOC	volatile organic compounds
WACS	White Alice Communications Systems
µg/L	micrograms per liter

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1.0 INTRODUCTION

The following report is an addendum to the Indian Mountain Long Range Radar Station (LRRS) Remedial Investigation/Feasibility Study (RI/FS) report dated October 1995 (Air Force 1995a). This report and the activities described were undertaken to fulfill the goals and objectives of the Air Force Installation Restoration Program (IRP). This report includes findings from additional characterization activities conducted in August 1995 at five of 11 Indian Mountain IRP source areas and revisions to RI/FS report conclusions for those source areas.

2.0 ADDITIONAL CHARACTERIZATION OF IRP SOURCE AREAS

Additional characterization activities were performed at IRP source areas SS02, OT08, SS09, SS10, and SS11 during the 1995 site visit. The objectives for source area sampling depend on the specific site, but the primary objectives were to further determine and define contaminant extent and to collect additional data for risk evaluation. A discussion of the objectives, field activities conducted, and sampling results are included, by source area, in the following sections. The work described in this addendum was originally proposed in the Work Plan and Sampling and Analysis Plan (SAP) for Interim Remedial Actions (Air Force 1995b). The 1995 analytical results were compared to applicable and relevant or appropriate requirements (ARARs) and preliminary remediation goals (PRGs) to evaluate human health and ecological risk. A brief discussion of potential exposure to contaminants above risk-based levels is provided in this addendum where appropriate. The Final RI/FS report (Air Force 1995a) contains a list of all potential ARARs and a description of the human health and ecological risk evaluations completed for Indian Mountain source areas. Tables summarizing all 1995 laboratory results are included in Appendices A through E. Copies of sampling forms are also included in the appendices. Appendix F contains copies of field logs for the August 1995 site visit.

2.1 SOURCE AREA SS02

Contamination from the former drum storage area was detected in subsurface soil samples collected in 1994. In particular, the soils contained volatile organic compounds (VOCs) above risk-based levels. Surface soil was not sampled in 1994 but surface soil data are required to perform human health and ecological risk evaluations.

2.1.1 Source Area Sampling

Surface soil samples were collected at SS02 during the 1995 investigation. Four surface soil samples were collected and analyzed for VOCs, semivolatile organic compounds (SVOCs), gasoline range organic compounds (GRO), and diesel range organic compounds (DRO). Locations were based on subsurface contamination detected in 1994 soil gas measurements and soil samples. The 1995 results are summarized in Table 2.1-1. A table containing all 1995 results from SS02 is included in Appendix A. Sample locations and results from 1995 investigations are shown in Figure 2.1-1.

2.1.2 Data Evaluation

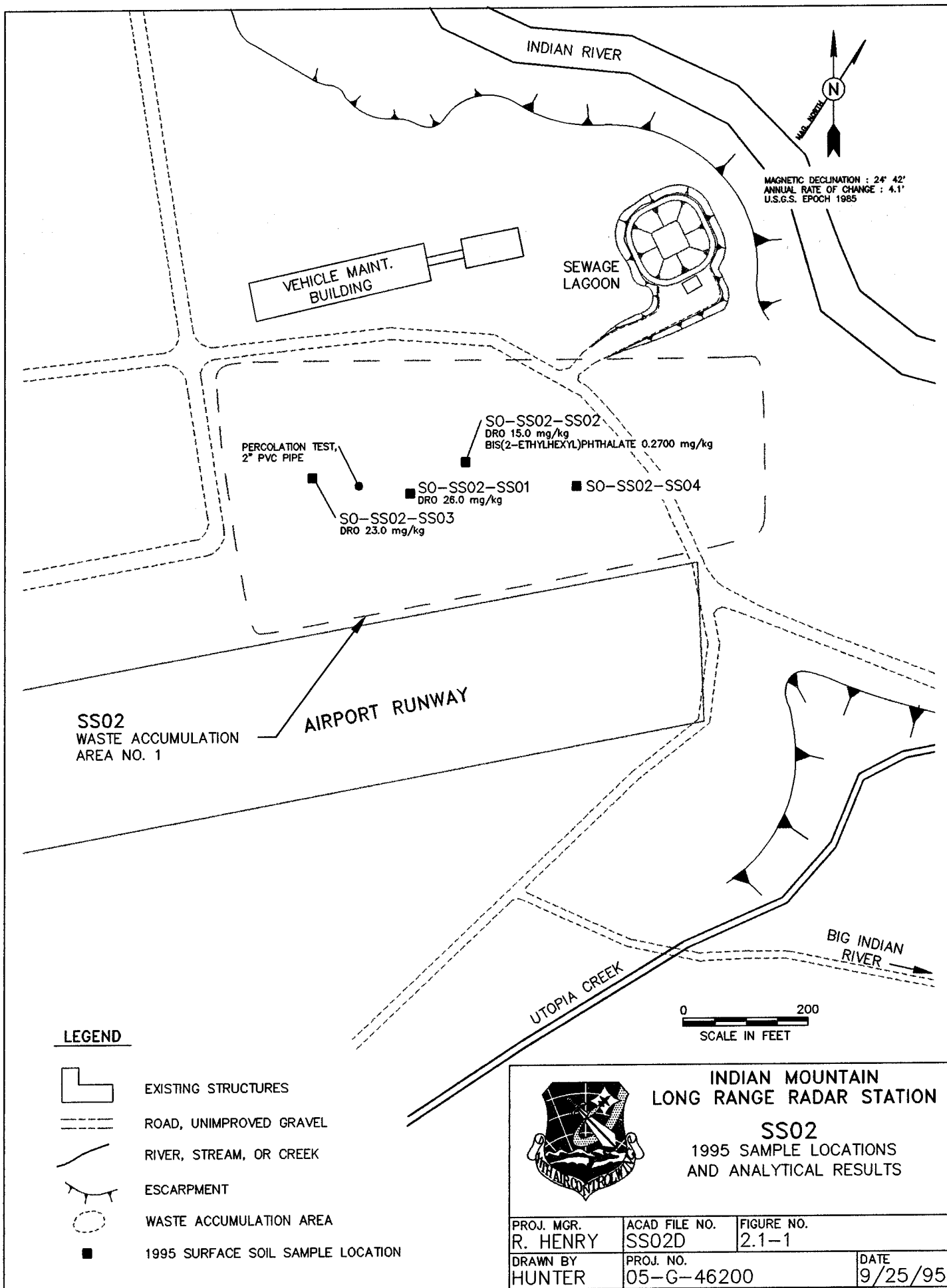
Limited contamination was detected in the source area SS02 surface soil samples. Three samples contained low concentrations of DRO (15 to 26 mg/kg), and no contaminants were detected in the fourth sample. These DRO concentrations are below the minimum levels established in the Alaska Department of Environmental Conservation (ADEC) *Interim Guidance for Non-UST Contaminated Soil Cleanup Levels* (ADEC 1991). One sample contained a low, estimated level of bis(2-ethylhexyl) phthalate, a suspected laboratory contaminant.

TABLE 2.1-1
Positive Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS01	AK102	DIESEL RANGE ORGANICS	26.00	MG/KG	0.9000		
SS	SO-SS02-SS02	SW8270	bis(2-ETHYLBHEXYL) PHTHALATE	0.27	MG/KG	0.1000	J	NO1
SS	SO-SS02-SS02	AK102	DIESEL RANGE ORGANICS	15.00	MG/KG	0.9000		
SS	SO-SS02-SS03	AK102	DIESEL RANGE ORGANICS	23.00	MG/KG	0.9000		

Notes:

J = estimated
MG/KG = milligrams per kilogram
NO1 = laboratory contaminant
SS = surface soil



2.1.3 Conclusions

Because the surface soil results presented above do not suggest that human health risk exists for personnel working in the area, no further action is recommended for source area SS02. It is recommended no further action be taken at SS02 and that a no further response decision document be prepared for the source area.

2.2 SOURCE AREA OT08

Polychlorinated biphenyls (PCBs) were measured above Toxic Substances Control Act (TSCA) levels in surface and shallow subsurface soil samples collected at OT08 in 1994. A preliminary estimate of the PCB-contaminated area was determined based on the 1994 results. Additional sampling, especially at depth, was considered necessary to further define PCB contamination extent and to better estimate the volume of soils containing PCBs above the TSCA levels.

2.2.1 Source Area Sampling

Eleven test pits were excavated using a backhoe and sampled at 2.5- and 5.0-foot depths. A surface (0.0- to 0.5-foot depth) soil sample was also collected at each test pit. Samples collected from the first five pits were analyzed using Ensysis PCB (Aroclor 1260) immunoassay test kits (EPA Method 4020). These results are listed in Table 2.2-1. Three of the pits were excavated at 1994 sampling locations where PCBs were detected in surface soils at high concentrations. These locations are OT08-SB01, OT08-SB02, and OT08-SS05. The fourth and fifth pits were designated OT08-TK01 and OT08-TK02. All test pit locations are shown in Figure 2.2-1. A combination of test kit analyses and laboratory analyses (EPA Method 8270) were used to evaluate samples collected from the remaining test pits. These six locations are designated OT08-SS08 through OT08-SS13. In general, samples were collected from three depths within each pit: surface (0.5-1.0 feet), 2.5-3.0 feet, and 4.5-5.0 feet. The

laboratory sample numbers begin with the prefix "SO-." Surface soil samples are designated with "SS-" preceding the number (e.g., SO-OT08-SS12), and subsurface samples are designated with "SB-" (e.g., SO-OT08-SB05). The test kit results are included in Table 2.2-1 and the laboratory results are summarized in Table 2.2-2. A summary table of all OT08 laboratory results is included in Appendix B.

To provide additional information regarding site soil characteristics, three samples were collected from OT08 for geotechnical characterization. Geotechnical data were collected to assess remedial alternatives amenable to site soil conditions. Analyses performed included soil classification, bulk density, permeability, cation-exchange capacity, particle size analysis and distribution, percent moisture, and organic content.

TABLE 2.2-1
OT08 PCB Test Kit Results
(Detection Limits 1, 10, and 40 parts per million)

Location	Surface (0.5 - 1.0 feet)	2.5 - 3.0 feet	4.5 - 5.0 feet
SS05	> 40	> 1, < 10	NA
SB01	>10, < 40	> 40	ND
SB02	> 40	> 40	> 40
TK01	> 10, < 40	ND	NA
TK02	ND	ND	NA
SS08	ND *	ND	NA
SS09/SB03	> 1, < 10	ND	NA *
SS10/SB04	ND *	ND *	ND
SS11/SB05	> 1, < 10	ND *	NA
SS12	ND *	**	**
SS13/SB06	ND *	ND *	NA

Notes:

NA = not analyzed

ND = not detected at 1 part per million

* = laboratory sample also collected

** = not collected

The results from these analyses are summarized in Table 2.2-2. The geotechnical results are included in Appendix B. The sample locations are shown in Figure 2.2-1. Copies of all OT08 field sampling forms, which include a description of subsurface materials, are also included in Appendix B.

As observed during test pit excavation, subsurface material consists of disturbed soil and rocks or fill from demolition of the former White Alice Communications Systems (WACS) facility. Subsurface material ranged from silt to boulders in size. Water was encountered at various depths within the pits. In general, the depth to water varied from water flowing across the ground surface to a depth of 2.5 feet below ground surface. Water was not encountered in all pits. In several of the pits, an obvious impermeable layer controlled the depth of water flow. Fractured bedrock and permafrost, which are thought to control groundwater flow, were encountered in several of the westernmost test pits. Clay layers observed in some of the excavations also control water flow.

The construction of a diversion ditch as an interim remedial action (IRA) for source area SS10 will serve to dewater source area OT08 and alter the presence of groundwater observed during test pit and ditch excavation. Details of this action are documented in the Construction Report for Interim Remedial Action and Treatability Study (Air Force 1995c).

2.2.2 Data Evaluation

PCBs were not detected above risk levels in source area OT08 soil samples analyzed by the laboratory. The laboratory analytical results and the test kit analyses correlate well in that analytes in all samples that underwent both analyses were not detected by either method. Laboratory detections of PCBs were below 1 part per million (ppm).

TABLE 2.2-2
Positive Laboratory Results
Source Area OT08
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Sample Depth (ft)	Analyte	Value	Units	Detection Limit	Lab Qualifier
SO	SO-OT08-SB05	SW8080	2.50	PCB-1260 (AROCOR 1260) ¹	0.04	MG/KG	0.0080	J
SO	SO-OT08-SB05	SW8080	2.50	PCB-1260 (AROCOR 1260) ²	0.04	MG/KG	0.0080	J
SO	SO-OT08-SB05	SW8080	2.50	PCB-1260 (AROCOR 1260) ²	0.04	MG/KG	0.0080	J
SO	SO-OT08-SS08	SW8080	0.50	PCB-1260 (AROCOR 1260) ²	0.09	MG/KG	0.0090	J
SO	SO-OT08-SS08	SW8080	0.50	PCB-1260 (AROCOR 1260) ¹	0.10	MG/KG	0.0090	J
SO	SO-OT08-SS08	SW8080	0.50	PCB-1260 (AROCOR 1260) ²	0.10	MG/KG	0.0090	J
SO	SO-OT08-SS12	SW8080	0.50	PCB-1260 (AROCOR 1260) ¹	0.20	MG/KG	0.0090	J
SO	SO-OT08-SS12	SW8080	0.50	PCB-1260 (AROCOR 1260) ²	0.19	MG/KG	0.0090	J
SO	SO-OT08-SS12	SW8080	0.50	PCB-1260 (AROCOR 1260) ²	0.20	MG/KG	0.0090	J
SS	SO-OT08-SB12	SW9081	0.50	CATION-EXCHANGE CAPACITY	32.00	MEQ/100G	5.0000	
SS	SO-OT08-SB12	SWD422	0.50	CLAY PERCENT	4.00	%		
SO	SO-OT08-SB12	D2216	0.50	PERCENT MOISTURE	7.70	%	0.0000	
SS	SO-OT08-SB12	SWD5084	0.50	PERMEABILITY	3.4E-06	CM/SEC		
SS	SO-OT08-SB12	SWD422	0.50	SAND PERCENT	9.00	%		
SS	SO-OT08-SB12	SWD422	0.50	SILT PERCENT	13.00	%		
SO	SO-OT08-SB12	D2487	0.50	SOIL CLASSIFICATION	BSG	N/A	N/A	
SO	SO-OT08-SB12	D854	0.50	SPECIFIC GRAVITY	2.75	MG/KG	0.0000	
SS	SO-OT08-SB12	SW9060	0.50	TOTAL ORGANIC CARBON	480.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.50	TOTAL ORGANIC CARBON	600.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.50	TOTAL ORGANIC CARBON	440.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.50	TOTAL ORGANIC CARBON	430.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.50	TOTAL ORGANIC CARBON	440.00	MG/KG	22.0000	
SS	SO-OT08-SB13	SW9081	0.50	CATION-EXCHANGE CAPACITY	30.00	MEQ/100G	5.0000	
SS	SO-OT08-SB13	SWD422	0.50	CLAY PERCENT	4.00	%		
SO	SO-OT08-SB13	D2216	0.50	PERCENT MOISTURE	26.00	%	0.0000	
SS	SO-OT08-SB13	SWD5084	0.50	PERMEABILITY	7.3E-07	CM/SEC		
SS	SO-OT08-SB13	SWD422	0.50	SAND PERCENT	11.00	%		
SS	SO-OT08-SB13	SWD422	0.50	SILT PERCENT	14.00	%		
SO	SO-OT08-SB13	D2487	0.50	SOIL CLASSIFICATION	BSG/S	N/A	N/A	

TABLE 2.2-2
Positive Laboratory Results
Source Area OT08
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Sample Depth (ft)	Analyte	Value	Units	Detection Limit	Lab Qualifier
SO	SO-OT08-SB13	D854	0.50	SPECIFIC GRAVITY	2.72	MG/KG	0.0000	
SS	SO-OT08-SB13	SW9060	0.50	TOTAL ORGANIC CARBON	500.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.50	TOTAL ORGANIC CARBON	500.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.50	TOTAL ORGANIC CARBON	490.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.50	TOTAL ORGANIC CARBON	510.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.50	TOTAL ORGANIC CARBON	510.00	MG/KG	27.0000	
SS	SO-OT08-SB14	SW9081	0.50	CATION-EXCHANGE CAPACITY	35.00	MEQ/100G	5.0000	
SS	SO-OT08-SB14	SWD422	0.50	CLAY PERCENT	5.00	%		
SO	SO-OT08-SB14	D2216	0.50	PERCENT MOISTURE	16.00	%	0.0000	
SS	SO-OT08-SB14	SWD5084	0.50	PERMEABILITY	NA	CM/SEC		
SS	SO-OT08-SB14	SWD422	0.50	SAND PERCENT	15.00	%		
SS	SO-OT08-SB14	SWD422	0.50	SILT PERCENT	31.00	%		
SO	SO-OT08-SB14	D2487	0.50	SOIL CLASSIFICATION	BSS/G	N/A	N/A	
SO	SO-OT08-SB14	D854	0.50	SPECIFIC GRAVITY	2.70	MG/KG	0.0000	
SS	SO-OT08-SB14	SW9060	0.50	TOTAL ORGANIC CARBON	450.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.50	TOTAL ORGANIC CARBON	500.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.50	TOTAL ORGANIC CARBON	450.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.50	TOTAL ORGANIC CARBON	430.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.50	TOTAL ORGANIC CARBON	420.00	MG/KG	10.0000	

Notes:

BSG = brown silty gravel
BSG/S = brown silty gravel with sand
BSS/G = brown silty sand with gravel
CM/SEC = centimeters per second
E = exponent
ft = feet
J = estimated
MEQ/100G = milliequivalent weights

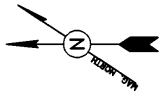
MG/KG = milligrams per kilogram
SO = subsurface soil (in Matrix column)
SS = surface soil
U = undetected (analyzed but not detected)
% = percent
1 = primary confirmation analysis (P1)
2 = confirmation analysis 1 or 2 (C1 or C2)

Test kit detection limits included 1, 10, and 40 ppm. According to test kit analyses, the three 1994 areas that were resampled are contaminated with PCBs above 40 ppm, which agrees with the 1994 results. At location SB02, where a concentration of 760 ppm PCBs was measured in near surface soils in 1994, detections greater than 40 ppm were measured in soils from each of the three depths sampled (surface, 2.5 to 3.0 feet, and 4.5 to 5.0 feet). Figure 2.2-2 shows all locations where PCBs were detected at concentrations greater than 40 ppm.

The geotechnical results support the evaluation of potential alternatives presented in Section 10.0 of the Final RI/FS report (Air Force 1995a). The geotechnical laboratory results for soil samples collected from OT08 can also be used for future remedial design activities. The permeability results, when adjusted to represent intrinsic values, ranged from 8.5×10^{-12} to 3.9×10^{-11} square centimeters (cm^2). The permeability results verify the elimination of soil vapor extraction (SVE) as a potential physical treatment process. SVE is generally not effective for soil with permeabilities less than 10^{-6} cm^2 (Danko 1991). The particle size analysis results from the geotechnical laboratory indicate that the combined clay and silt content at source area OT08 ranges from 17 to 36 percent (Table 2.2-2). This amount of fines would affect the technical implementability of soil washing at OT08. This information supports eliminating soil washing as a physical treatment process in Section 10.0 of the RI/FS.

2.2.3 Conclusions

The additional PCB results confirm the estimated volume of soils contaminated above risk-based levels (10 ppm) included in the Final RI/FS report (Air Force 1995a). The estimated volume is 1,500 cubic yards.



MAGNETIC DECLINATION : 24° 42'
ANNUAL RATE OF CHANGE : 4.1'
U.S.G.S. EPOCH 1985

LEGEND

SS03
PCB 5.1 mg/kg
PCB > 1, < 40 ppm

— LAB SAMPLES AND RESULTS

— PCB TEST KIT SAMPLE LOCATION AND RESULTS

REFER TO TABLE 2.2-2 FOR GEOTECHNICAL RESULTS AND PCB RESULTS FOR SPECIFIC DEPTHS



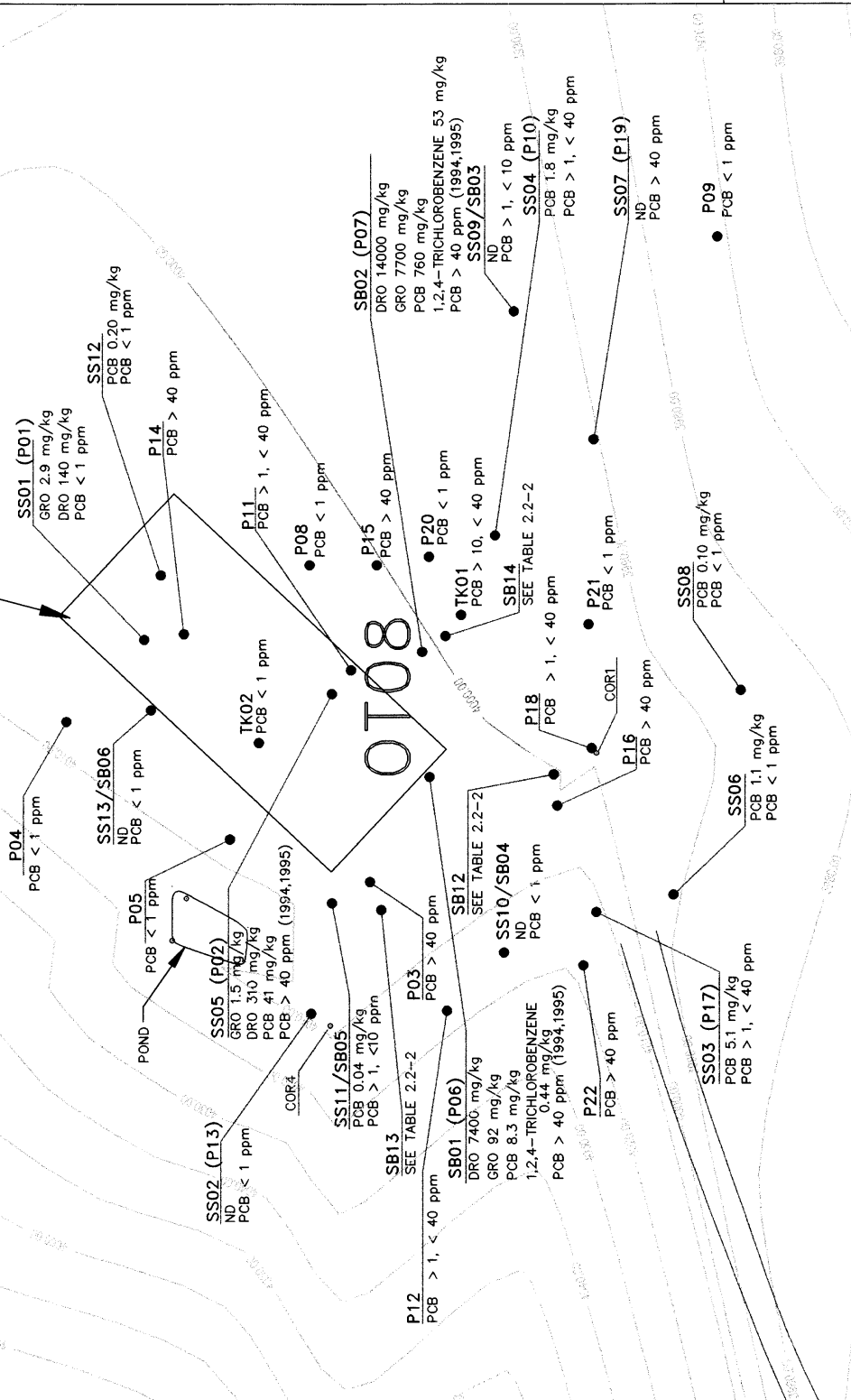
INDIAN MOUNTAIN
LONG RANGE RADAR STATION

OT08
LABORATORY AND FIELD
SCREENING LOCATIONS
AND RESULTS

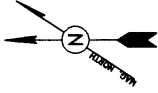
PROJ. MGR. R. HENRY	ACAD. FILE NO. 42-1	FIGURE NO. 2.2-1
DRAWN BY HUNTER	PROJ. NO. 05-G-46200	DATE 6/9/95

FORMER LOCATION
OF WACS BUILDING

OT08



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MAGNETIC DECLINATION : 24° 42'
ANNUAL RATE OF CHANGE : 4.1'
U.S.G.S. EPOCH 1985

LEGEND

SS03 — LAB SAMPLES AND RESULTS
PCB 5.1 mg/kg
PCB > 1, < 40 ppm
PCB TEST KIT SAMPLE LOCATION AND RESULTS

REFER TO TABLE 2.2-2 FOR GEOTECHNICAL RESULTS AND PCB RESULTS FOR SPECIFIC DEPTHS



INDIAN MOUNTAIN
LONG RANGE RADAR STATION
OT08
PCB DETECTIONS
GREATER THAN 40 PPM



PROJ. MGR.	ACAD FILE NO.	FIGURE NO.
R. HENRY	22-2	2.2-2
DRAWN BY	PROJ. NO.	DATE
HUNTER	05-G-46200	10/18/95

FORMER LOCATION
OF WACS BUILDING

POND

P14
● PCB > 40 ppm

SS05 (P02)

GRO 1.5 mg/kg
DRO 310 mg/kg
PCB 41 mg/kg
PCB > 40 ppm (1994,1995)

P15
● PCB > 40 ppm

SB02 (P07)

DRO 14000 mg/kg
GRO 7700 mg/kg
PCB 760 mg/kg
1,2,4-TRICHLOROBENZENE 53 mg/kg
PCB > 40 ppm (1994,1995)

SS07 (P19)
ND
PCB > 40 ppm

P16
● PCB > 40 ppm

COR1

P22
● PCB > 40 ppm

SB01 (P06)

DRO 7400 mg/kg
GRO 92 mg/kg
PCB 8.3 mg/kg
1,2,4-TRICHLOROBENZENE 0.44 mg/kg
PCB > 40 ppm (1994,1995)

P03
● PCB > 40 ppm

COR4

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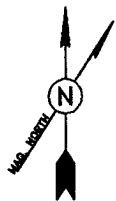
Thermal desorption with dechlorination was the remedial alternative recommended in the Final RI/FS for OT08 (Air Force 1995a). After review of the 1995 sampling results, this method remains the preferred alternative. Alternatives may be reevaluated before remedial action is undertaken so that technological advances may be considered. Institutional controls will be established and warning signs constructed to prevent excavation in the area until a final remedial alternative decision is made.

2.3 SOURCE AREA SS09

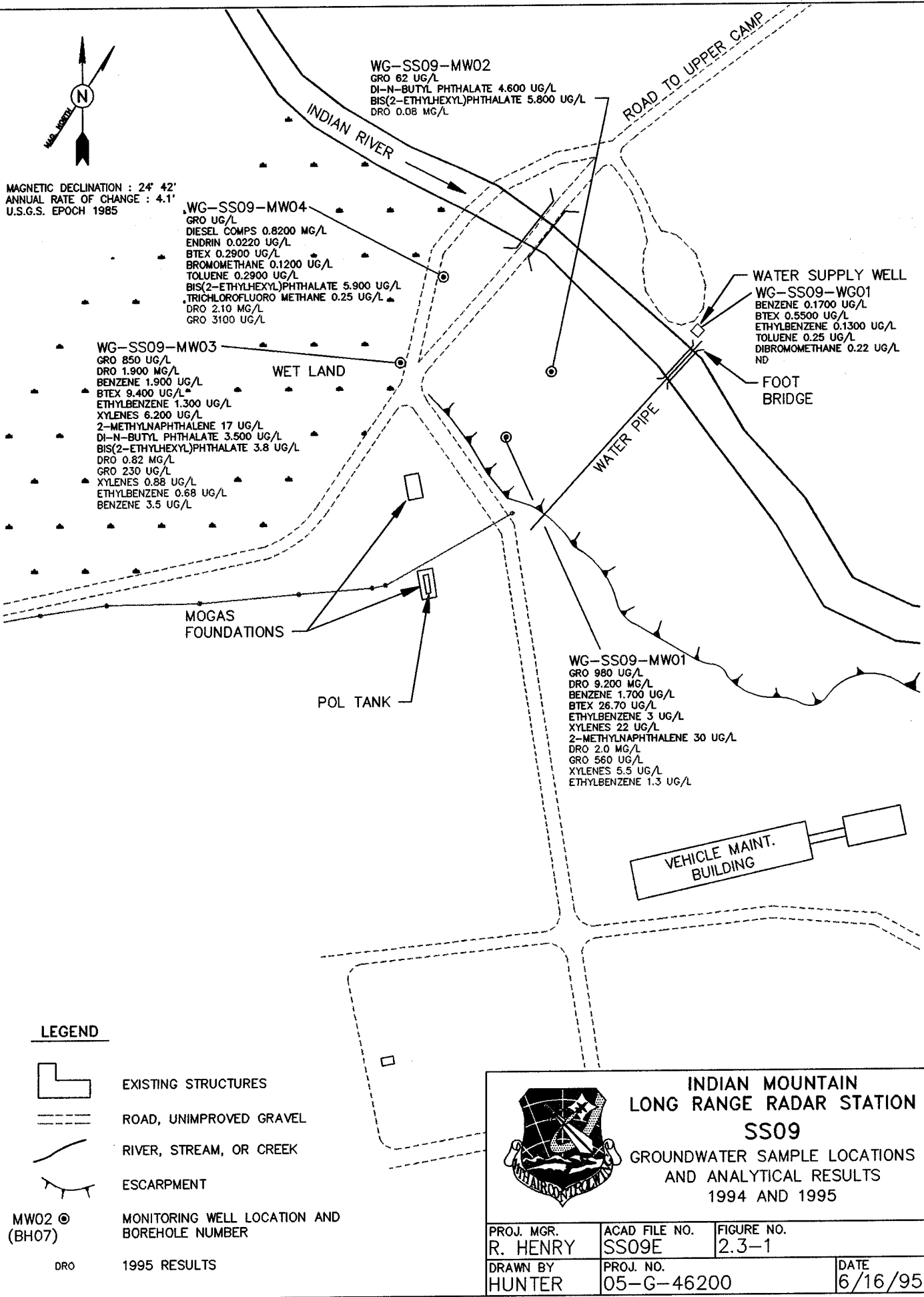
Source area SS09 is the former location of motor vehicle gasoline (MOGAS) fuel tanks and documented fuel releases. Four monitoring wells were installed and sampled at source area SS09 in 1994. Because VOC, SVOC, GRO, and DRO contaminants were detected in the wells, and because the wells are directly across the Indian River from the station water supply well, additional sampling was considered necessary. Monitoring well locations are shown in Figure 2.3-1.

2.3.1 Source Area Sampling

The objective of groundwater sampling in 1995 was to assess the presence of contaminants, generate a data set to compare to the 1994 results, and determine whether SS09 contaminants have migrated to the water supply well. As described in the IRA Work Plan and SAP (Air Force 1995b), water levels in the monitoring wells, the water supply well, and the Indian River were measured frequently to evaluate the connection between the wells and the river. The water levels in the monitoring wells were measured from the top of the well casing. The Indian River water level was measured from a calibrated marker attached to a bridge support. The water level staff gauge installed in 1994 was destroyed during the winter. The new marker was not surveyed; therefore, an absolute water level elevation for the river is not available.



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Each of the four SS09 monitoring wells and the station water supply well were sampled and analyzed for VOC, GRO, and DRO concentrations. The laboratory results are summarized in Table 2.3-1 and shown in Figure 2.3-1. Appendix C contains a complete list of 1995 SS09 sampling results.

2.3.2 Data Evaluation

Limited contamination was detected in the source area SS09 groundwater samples. Contamination was not measured in the water supply well. GRO or DRO were present in all wells in excess of the ADEC water quality levels (ADEC 1995) established for total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH). The levels are 10 µg/L for TAH and 15 µg/L for TAqH. Phthalates were detected in all wells in 1994 but were not measured above detection limits in any of the 1995 groundwater samples. Total xylenes and ethylebenzene were both measured in wells SS09-MW01 and MW03. Levels detected were below available human health and ecological risk-based screening criteria, usually by one or more order of magnitude. Benzene was detected in three wells in 1994 and in well SS09-MW03 in 1995. The benzene concentration measured in MW03 exceeded the Alaska water quality ARAR (ADEC 1995) and the federal ambient water quality criteria (AWQC) ARAR (EPA 1986). Well SS09-MW03 is closest to the area of fuel releases and farthest away from the Indian River. Groundwater was not encountered in boreholes upgradient of MW03 that were drilled and sampled in 1994.

Water levels were measured on five of the eight days of field work. Water level variations versus time are summarized in Table 2.3-2 and Figure 2.3-2. The table and figure do not indicate actual elevation differences between the wells and the river. These data reflect that the groundwater in the SS09 monitoring wells represents bank storage of the Indian River and is subject to fluctuations resulting from increased or decreased discharge of the river. The connection is more apparent after reviewing the

TABLE 2.3-1
Positive Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-MW01-02	AK102	DIESEL RANGE ORGANICS	2.00	MG/L	0.1000	J
WG	WG-SS09-MW01-02	SW8260	ETHYLBENZENE	1.30	UG/L	0.3000	J
WG	WG-SS09-MW01-02	AK101	GASOLINE RANGE ORGANICS	560.00	UG/L	70.0000	
WG	WG-SS09-MW01-02	SW8260	TOTAL XYLENES	5.50	UG/L	0.3000	
WG	WG-SS09-MW02-02	AK102	DIESEL RANGE ORGANICS	0.08	MG/L	0.0200	J
WG	WG-SS09-MW03-02	SW8260	BENZENE	3.50	UG/L	0.2000	
WG	WG-SS09-MW03-02	AK102	DIESEL RANGE ORGANICS	0.82	MG/L	0.0200	J
WG	WG-SS09-MW03-02	SW8260	ETHYLBENZENE	0.68	UG/L	0.3000	J
WG	WG-SS09-MW03-02	AK101	GASOLINE RANGE ORGANICS	230.00	UG/L	70.0000	
WG	WG-SS09-MW03-02	SW8260	TOTAL XYLENES	0.88	UG/L	0.3000	J
WG	WG-SS09-MW04-02	AK102	DIESEL RANGE ORGANICS	2.10	MG/L	0.0200	
WG	WG-SS09-MW04-02	AK101	GASOLINE RANGE ORGANICS	3100.00	UG/L	70.0000	

Notes:

J = estimated

MG/L = milligrams per liter

UG/L = micrograms per liter

WG = groundwater

increase in water levels in the river and wells following an 12 and 13 August 1995 rain event. The fact that groundwater was not encountered in boreholes drilled upgradient of wells SS09-MW01 and SS09-MW03 further supports the conclusion that SS09 groundwater is Indian River bank storage.

FIGURE 2.3-2
Water Level Fluctuations with Time
SS09 Wells and Indian River

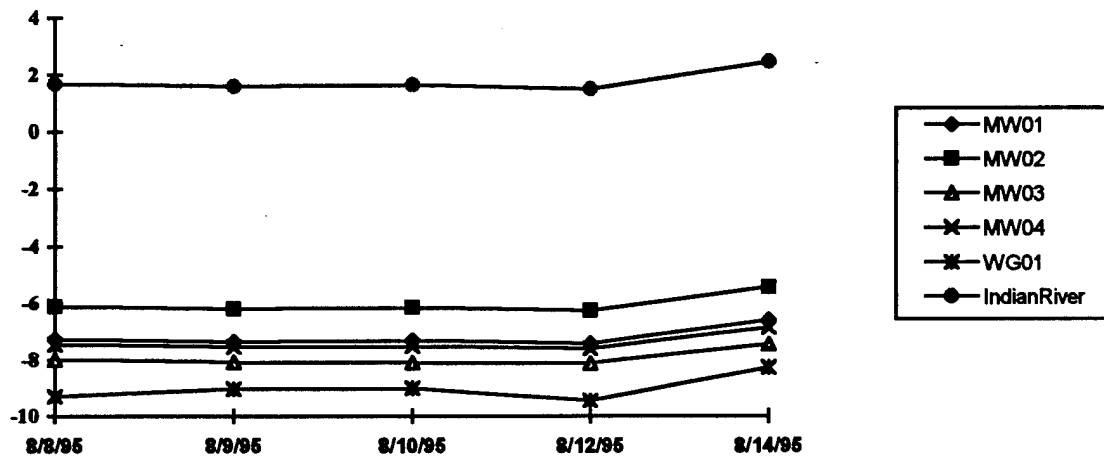


TABLE 2.3-2
Summary of Water Levels*

	SS09-MW01	SS09-MW02	SS09-MW03	SS09-MW04	SS09-WG01	Indian River
8/8/95	7.26	6.11	7.98	7.44	9.30	1.7
8/9/95	7.36	6.21	8.06	7.54	9.02	1.6
8/10/95	7.31	6.16	8.10	7.51	9.01	1.65
8/12/95	7.42	6.28	8.12	7.60	9.45	1.50
8/14/95	6.61	5.45	7.44	6.87	8.27	2.45

Notes:

- * Water levels in wells were measured from the top of the well casing. River levels were measured as relative change and are not corrected for actual elevation.

2.3.3 Conclusions

The investigations at SS09 indicate that contamination in excess of state and federal ARARs is present in groundwater that is Indian River bank storage and therefore flows into the river. Additional data collection of surface water from the river, and possibly groundwater from SS09, is necessary to fully characterize contaminant migration and develop remedial alternatives.

2.4 SOURCE AREA SS10

Sources of contamination at source area SS10 include historical fuel releases from aboveground fuel tanks and chemical releases from a large drum storage area. An investigation of surface water locations at SS10 was conducted in 1995 to confirm the presence and concentration of pentachlorophenol (PCP) in surface water seeps at Upper Camp. Detections of PCP at two 1994 locations exceeded the AWQC (EPA 1986).

2.4.1 Source Area Sampling

The objective of the additional sampling at SS10 was to determine the extent of PCP contamination above the screening criteria. Eight samples were analyzed using Ensysis PCP test kits (EPA Method 4010). The test kit detection levels were 10 and 40 ppm. PCP was not detected in any of the test kit samples. Wire fencing was proposed in the IRA Work Plan and SAP (Air Force 1995b) to prevent animal access to PCP-contaminated surface water. Because PCP was not detected in the test kit samples, fencing was not constructed over any of the test kit sampling locations. Three surface water samples were also collected for laboratory analysis of SVOCs (EPA Method SW8270), which includes PCP. PCP was detected in two of the samples. The laboratory results are included in Table 2.4-1. Laboratory results and sampling

TABLE 2.4-1
Positive Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW10	SW8270	PENTACHLOROPHENOL	460.00	UG/L	20.0000		MC CR ZZ	WA WC YY
WS	WS-SS10-SW11	SW8270	PENTACHLOROPHENOL	42.00	UG/L	3.0000	J	MC CR ZZ	WA WC YY

Notes:

ARAR = applicable or relevant and appropriate requirements

COPC = Contaminant of Potential Concern

COPEC = Contaminant of Potential Ecological Concern

CR = exceeds residential carcinogenic 10^{-6} water only - human health Preliminary Remediation Goal

MC = exceeds maximum contaminant level

UG/L = micrograms per liter

WA = AWQC (federal ambient water quality criteria) acute - ecological ARAR

WC = AWQC (federal ambient water quality criteria) chronic - ecological ARAR

WS = surface water

YY = retained as an ecological COPEC

ZZ = retained as a human health COPC

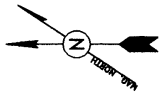
locations are included in Figure 2.4-1. Appendix D includes a complete list of 1995 sampling results for SS10.

2.4.2 Data Evaluation

PCP was identified as an ecological and human health contaminant of potential concern (COPC) in two SS10 surface water samples. The samples were designated WS-SS10-SW10 and -SW11. The concentration of PCP in both samples exceeded both acute (20 µg/L) and chronic (13 µg/L) exposure ARARs for ecological receptors. In addition, PCP levels exceeded the human health PRG for carcinogenic risk and the maximum contaminant level for protection of human health. The analyte concentration was estimated in sample WS-SS10-SW11.

The potential for human exposure to PCP in SS10 surface water is limited. The seeps where high levels of PCP are present are intermittent; flow is present after rain events. In addition, the Upper Camp area is frozen between October and May. Human activity at Upper Camp is limited to work inside the radar dome, road grading, and road maintenance. Sample WS-SS10-SW10 is located in an area that is rarely, if ever, visited by site personnel. Sample WS-SS10-SW11 was collected from a seep adjacent to the road to the radar dome. It is possible that a site worker would be in the area to perform road maintenance but exposure is considered unlikely because of low seep flow. The volume of water in the seep is small enough that in both 1994 and 1995 it was necessary to excavate a small catchment area to collect water samples.

The analytical results from the 1995 samples were evaluated as part of the quantitative ecological risk assessment process that was completed for PCP concentrations detected in surface waters at SS10 in 1994.



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LEGEND



SD01 - DUMP AREAS



SS10 - WASTE ACCUMULATION
AREA 6 AND FUEL RELEASES
2, 5, 6, 7, 9, AND 10



OT08 - FORMER WACS LOCATION



IRA - DIVERSION DITCH

NOTE: ALL IRP SOURCE AREA LOCATIONS
ARE APPROXIMATE

CONTOUR INTERVAL = 10'



SCALE IN FEET

INDIAN MOUNTAIN
LONG RANGE RADAR STATION
SS10 PCP SAMPLING LOCATIONS
AND ANALYTICAL RESULTS
1994 AND 1995



PROJ. MGR. R. HENRY

ACAD. FILE NO. 2 4-1

FIGURE NO. 2 4-1

DRAWN BY J. HUNTER

PROJ. NO. 05-G-46200

DATE 9/21/95

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To summarize the 1994 effort, surface water samples collected from two locations in 1994 contained PCP levels exceeding the AWQC (EPA 1986). Because complete pathways for ecological exposures exist, PCP was considered a chemical of potential ecological concern and data from 18 surface water samples were subjected to a quantitative ecological risk evaluation. The approach and results of the 1994 risk evaluation were presented in detail in the Final RI/FS report (Air Force 1995a). The previous quantitative risk evaluation was conducted to determine whether site-specific receptors that feed on flora and fauna in the affected surface water bodies would be sufficiently affected to warrant further action. The primary conclusion in 1994 is that avian and mammalian species that forage at Indian Mountain are not predicted to be negatively affected by PCP concentrations in SS10 surface water.

As stated, in 1995, three additional surface water samples were collected to further characterize PCP concentrations in the SS10 area. The maximum detected concentration of PCP in 1995 was 460 µg/L. The maximum detected concentration in 1994 was 230 µg/L of PCP. Because the maximum detected concentration in 1995 exceeded the 1994 levels, the data from the 1995 investigation were added to the 1994 data set and the quantitative risk evaluation was repeated to evaluate the potential for adverse affects. Appendix R of the Final RI/FS report (Air Force 1995a) gives a detailed explanation of the evaluation process and a definition of terms.

For the 1995 evaluation, data from 21 surface water samples with an arithmetic mean PCP concentration of 0.039 µg/L were evaluated. This compares with an arithmetic mean PCP concentration of 0.018 µg/L that was used in the 1994 risk evaluation. For completion of the risk evaluation, the same ecological receptors and species-specific assumptions that were used in 1994 were used in the 1995 evaluation.

For the 1995 assessment, the exposure pathways that were evaluated included the small mammal ingesting vegetation (based on arithmetic mean of PCP and home range); a passerine ingesting aquatic invertebrates (based on arithmetic mean of PCP

and home range); a raptor ingesting a small mammal, and a raptor ingesting a passerine (both of the latter were evaluated using arithmetic mean and home range).

Based on the evaluation of these exposure pathways, only one of the calculated ADDs exceeded the associated toxicity reference value (TRV). The applied daily dose (ADD) for the passerine ingesting aquatic invertebrates (2.6 milligrams per kilogram per day [mg/kg] per day) exceeded its selected TRV (1.3 mg/kg per day). The ADDs for the remaining exposure scenarios (small mammal ingesting vegetation and raptor ingesting a small mammal and a passerine) were less than their respective TRVs. Because the ADDs for these scenarios were less than the TRV, it can be concluded that detected PCP concentrations, when evaluating the mean concentration, are not anticipated to cause adverse affects to these receptors.

As stated, the ADD for the passerine ingesting aquatic invertebrates exceeded the associated TRV. Although the TRV was exceeded, it is unlikely that adverse affects will occur to passerines using the SS10 area, for several reasons. First, the surface water seeps are ephemeral and water flow is present only after significant storm events or from snow melt. Second, the harsh weather conditions that are very common during the summer months provide a natural barrier between passerines and the surface water within these seeps. Additionally, passerines do not frequent the Upper Camp area during the winter months and if they were to visit the area, surface waters are not active because temperatures are extreme. Thirdly, additional TRVs that are available for avian species that resulted in no deaths to the test species are reported at concentrations up to 3,100 mg/kg of PCP in diet (Hill and Camardese 1986). This TRV (3,100 mg/kg), which resulted in no deaths to the test species (Japanese quail), is far greater than the TRV (1.3 mg/kg) selected for comparison to the calculated ADD. Additionally, PCP in surface water was assumed to be 100 percent bioavailable to aquatic receptors frequenting the ephemeral seeps. This conservative assumption is expected to overestimate the potential exposure to aquatic receptors and hence, to passerines. For these reasons, it is not expected that passerines will suffer adverse

effects from the ingestion of aquatic receptors surviving in the ephemeral seeps within the SS10 area.

2.4.3 Conclusions

Based on the site conditions described above, potential for adverse effects from PCP-contaminated surface water is not expected. Further action at the SS10 PCP seeps is not recommended. The RI/FS recommendations for remediation of other SS10 contamination (fuels-related) is not affected by the results of 1995 field sampling for PCP. Institutional controls, including warning signs, will be implemented to prevent site personnel from excavating heavily contaminated soils and from exposure to the seeps containing PCP.

The construction of a diversion ditch as an IRA for source area SS10 was completed in August 1995. Details of this action are documented in the Construction Report for Interim Remedial Action and Treatability Study (Air Force 1995c). The primary objective of this action was to divert water around source area OT08, a PCB release area. The ditch will dewater OT08, which will decrease the transport of PCB by erosion and groundwater migration and will make future action related to PCB contamination easier to implement. A small monitoring well was installed within the lined ditch. Annual sampling of the well is recommended for the next five years to evaluate the ability of water that flows through SS10 to transport fuel contamination that is present in source area soils away from the site.

2.5 SOURCE AREA SS11

The sources of contamination at SS11 are fuel releases from the Lower Camp fuel storage tanks. The 1994 investigation at source area SS11 focused on subsurface soil and groundwater. A single sediment sample was collected in 1994. This sample contained elevated levels of GRO and DRO. Additional characterization of SS11

surface soil was considered necessary to define contaminant extent and evaluate human health and ecological risk.

2.5.1 Source Area Sampling

Although the goal was to collect surface soil samples, the presence of dense vegetation and decaying plant matter required excavation. Soils were accessed by removing live vegetation and up to 8 inches of decaying vegetation with a shovel. Although the soil collected may not have been exposed at the ground surface, it was the uppermost soil horizon that was suitable for laboratory analysis.

Twelve petroleum hydrocarbon test kit samples were analyzed to select locations for laboratory samples. The test kits were immunoassay type and follow EPA Method 4030. Test kit results are included as Table 2.5-1. Five laboratory samples were collected from locations where both test kit detections and nondetections occurred. Laboratory methods included VOC, SVOC, GRO, and DRO. Laboratory results are summarized in Table 2.5-2. The laboratory sample locations and results are shown in Figure 2.5-1. A complete list of 1995 sampling results from SS11 is included in Appendix E. Copies of all SS11 field sampling forms are also included in Appendix E.

TABLE 2.5-1 SS11 Petroleum Hydrocarbon Test Kit Results
(Detection Levels 50 and 200 ppm gasoline range organic compounds)*

Location	Result	Laboratory Sample
TK01	ND	
TK02	ND	SO-SS11-SS01
TK03	> 200	
TK04	ND	
TK05	ND	
TK06	ND	
TK07	ND	
TK08	ND	SO-SS11-SS02
TK09	ND	SO-SS11-SS03
TK10	ND	
TK11	> 200	SO-SS11-SS05
TK12	> 200	SO-SS11-SS04

Notes:

- * Based on test kit sensitivities, these GRO levels are approximately equivalent to 75 and 300 ppm diesel range organic compounds

ND = Not detected

TABLE 2.5-2
Positive Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS01	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.50	MG/KG	0.1000	J	YY
SS	SO-SS11-SS02	AK102	DIESEL RANGE ORGANICS	1.70	MG/KG	1.0000	J	
SS	SO-SS11-SS03	SW8240	ACETONE	0.04	MG/KG	0.0220	J	YY
SS	SO-SS11-SS03	AK102	DIESEL RANGE ORGANICS	9300.00	MG/KG	2.5000		
SS	SO-SS11-SS03	AK101	GASOLINE RANGE ORGANICS	4500.00	MG/KG	100.0000		
SS	SO-SS11-SS04	AK102	DIESEL RANGE ORGANICS	8600.00	MG/KG	450.0000		
SS	SO-SS11-SS04	AK101	GASOLINE RANGE ORGANICS	570.00	MG/KG	0.9000		
SS	SO-SS11-SS05	AK102	DIESEL RANGE ORGANICS	270.00	MG/KG	15.0000		

Notes:

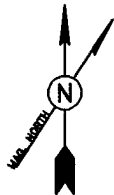
COPEC = Contaminant of Potential Ecological Concern

J = estimated

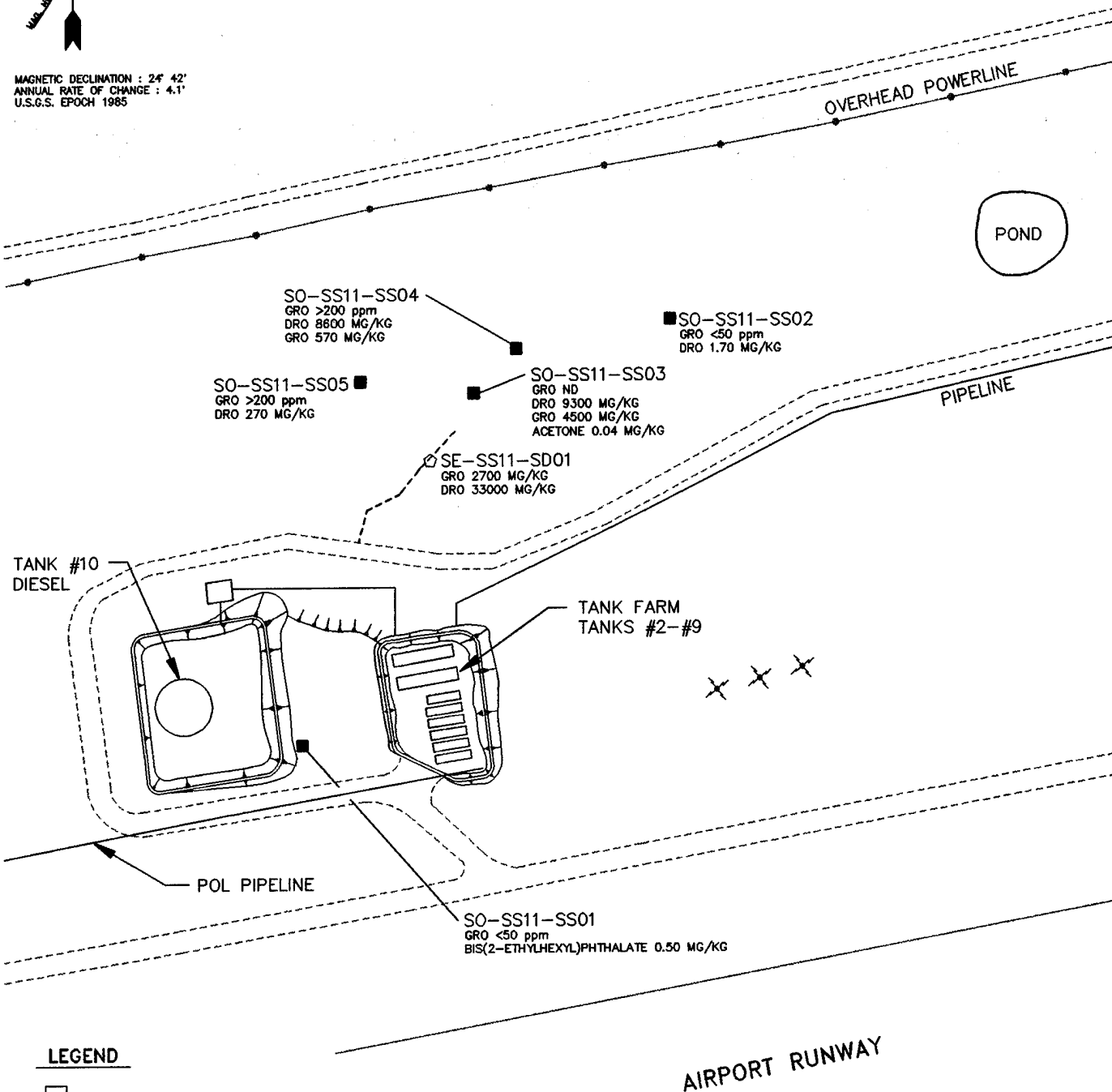
MG/KG = milligrams per kilogram

SS = surface soil

YY = retained as an ecological COPEC



MAGNETIC DECLINATION : 2° 42'
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LEGEND



EXISTING STRUCTURES



ROAD, UNIMPROVED GRAVEL



ESCARPMENT



SURFACE DRAINAGE (DRY)



1995 SURFACE SOIL SAMPLE LOCATION



1994 SEDIMENT SAMPLE LOCATION



ANTENNA



INDIAN MOUNTAIN LONG RANGE RADAR STATION

SS11 1995 SAMPLE LOCATIONS AND ANALYTICAL RESULTS

PROJ. MGR. R. HENRY	ACAD FILE NO. SS11D	FIGURE NO. 2.5-1
DRAWN BY HUNTER	PROJ. NO. 05-G-46200	DATE 9/22/95

2.5.2 Data Evaluation

Four of five surface soil samples obtained in 1995 contained DRO; concentrations ranged from low to moderately high. Of note, DRO was detected at concentrations of 9,300 and 8,600 mg/kg in samples SS11-SS03 and SS11-SS04. Surface soil sample SS11-SS03 contained 4,500 mg/kg GRO. Two analytes, bis(2-ethylhexyl) phthalate and acetone, found in two surface soil samples, were identified as contaminants of potential ecological concern, not because risk levels were exceeded but because risk-based levels have not been calculated for these compounds. These levels were estimated by the laboratory. Both compounds are common laboratory contaminants.

As described earlier, access to the soils sampled at SS11 is limited by dense vegetation and plant matter. Human or ecological exposure to the contaminants measured in the soils is unlikely. The small drainage where sediment was sampled in 1994 is accessible to a greater variety of ecological receptors.

2.5.3 Conclusions

Exposure to DRO or GRO in the areas sampled in 1995 is improbable; therefore, further action is not recommended for SS11 surface soils. DRO contamination was measured in 1994 in the small drainage on the north side of the tanks. Because it presents a physical hazard to ecological receptors, action to prevent exposure to sediments is recommended. Cleanup may be required at some time in the future but is not recommended at this time. The station fuel tanks are located directly upgradient of the drainage. Because the tanks are still in use (in fact Tank No. 10 was recently returned to service) and the possibility for spills still exists, cleanup of contaminated sediment is not practical. Sediment sampling is recommended for the drainage. The samples will be tested for fuel concentrations and nutrient levels. Field methods or laboratory analyses may be used to collect the required data. The results will be

3.0 SUMMARY OF CONCLUSIONS

The 1995 sampling effort and resulting data were sufficient to complete source area characterization and risk evaluation needed for source areas SS02, OT08, and SS10. Additional data needs were not identified for these source areas. No further action is recommended for source area SS02. The remedial alternatives selected for OT08 and SS10 in the Final RI/FS report (Air Force 1995a) are still the favored alternatives for these sites. Institutional controls and sign postings are recommended for OT08 and SS10 to prevent access to subsurface soil or surface water contaminants. Additional investigation is recommended for source areas SS09 and SS11. More specific suggestions were described in Sections 2.3 and 2.5 of this report.

The conclusions or recommendations for each source area are summarized in the following table. The remedial technologies listed were evaluated in the Final RI/FS report (Air Force 1995a).

TABLE 3-1 Recommendations for RI/FS Addendum Source Areas

Source Area	1995 Tasks	1995 Conclusions/ Recommendations
SS02	Surface soil sampling	No further action.
OT08	PCB extent determination and subsurface soil characterization	Extent estimated. Establish institutional controls and post signs to prevent excavation in area until remedial action is implemented. Thermal desorption and dechlorination recommended for PCB removal.
SS09	Water level measurement Monitoring well sampling	SS09 groundwater is river bank storage. Conduct surface water and groundwater sampling to evaluate contaminant migration to Indian River. Remedial alternatives will be evaluated when additional data are available.
SS10	Surface water sampling for PCP	No further action at PCP locations. Establish institutional controls and post signs to prevent access to contaminants until remedial action is implemented. Recommendation for fuel contamination is natural attenuation and long-term monitoring.
SS11	Surface soil sampling	Characterize nutrient levels and contaminant concentrations in drainage sediment. Remedial alternatives will be evaluated when additional data are available.

4.0 REFERENCES

- Alaska Department of Environmental Conservation (ADEC). 1991 (July). *Interim Guidance for Non-UST Contaminated Soil Cleanup Levels*. Guidance No. 001, Rev. 1.
- Alaska Department of Environmental Conservation (ADEC). 1995 (January). *Water Quality Standards*. 18 Alaska Administrative Code (AAC) 70. Register 133, April 1995.
- Danko, Joseph. 1991. "Applicability and Limits of Soil Vapor Extraction for Sites Contaminated with Volatile Organic Compounds." In *Soil Vapor Extraction Technology Reference Handbook*, U.S. Environmental Protection Agency, 1991 (February), EPA/540/2-91/003.
- Hill, E.F. and M.B. Camardese. 1986. *Lethal Dietary Toxicities of Environmental Contaminants and Pesticides to Coturnix*. U.S. Fish and Wildlife Service. Fish Wildlife Technical Report 2. 147 pp.
- U.S. Air Force. 1995a (October). *Final Remedial Investigation/Feasibility Study, Indian Mountain LRRS, Alaska*. Prepared for the 11th Air Control Wing, 611th Civil Engineer Squadron, Elmendorf, Alaska by Jacobs Engineering Group Inc.
- U.S. Air Force. 1995b (July). *Work Plan and Sampling and Analysis Plan for Interim Remedial Actions, Indian Mountain LRRS, Alaska*. Prepared for the 11th Air Control Wing, 611th Civil Engineer Squadron, Elmendorf, Alaska by Jacobs Engineering Group Inc.
- U.S. Air Force. 1995c (December). *Construction Report for Interim Remedial Action and Treatability Study, Indian Mountain LRRS, Alaska*. Prepared for the 11th Air Control Wing, 611th Civil Engineer Squadron, Elmendorf, Alaska by Jacobs Engineering Group Inc.
- U.S. Environmental Protection Agency. 1986. *Quality Criteria for Water*. EPA 440/5-86-001.

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APPENDIX A
SS02 LABORATORY RESULTS
SS02 SAMPLING FORMS

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS01	SW8240	1,1,1-TRICHLOROETHANE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS01	SW8240	1,1,2,2-TETRACHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS01	SW8240	1,1,2-TRICHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS01	SW8240	1,1-DICHLOROETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS02-SS01	SW8240	1,1-DICHLOROETHENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS01	SW8270	1,2,4-TRICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	1,2-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8240	1,2-DICHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS01	SW8240	1,2-DICHLOROPROPANE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS01	SW8270	1,3-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	1,4-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2,4,5-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2,4,6-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2,4-DICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2,4-DIMETHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2,4-DINITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	2,4-DINITROTOLUENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	2,6-DINITROTOLUENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8240	2-CHLOROETHYL VINYL ETHER	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS01	SW8270	2-CHLORONAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2-CHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8240	2-HEXANONE	0.00	MG/KG	0.0030	U	
SS	SO-SS02-SS01	SW8270	2-METHYLNAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	2-NITROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	3,3'-DICHLOROBENZIDINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	3-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	4-CHLOROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS01	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	MG/KG	0.3000	U	
SS	SO-SS02-SS01	SW8270	4-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	4-NITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	ACENAPHTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	ACENAPHTHYLENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8240	ACETONE	0.00	MG/KG	0.0090	U	
SS	SO-SS02-SS01	SW8270	ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8240	BENZENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS01	SW8270	BENZO(a)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	BENZO(a)PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	BENZO(b)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	BENZO(g,h,i)PERYLENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	BENZO(k)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	BENZOIC ACID	0.00	MG/KG	1.0000	U	
SS	SO-SS02-SS01	SW8270	BENZYL ALCOHOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	BENZYL BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8240	BROMODICHLOROMETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS02-SS01	SW8240	BROMOFORM	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS01	SW8240	BROMOMETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS01	SW8240	CARBON DISULFIDE	0.00	MG/KG	0.0020	U	
SS	SO-SS02-SS01	SW8240	CARBON TETRACHLORIDE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS01	SW8240	CHLOROBENZENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS01	SW8240	CHLOROETHANE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS01	SW8240	CHLOROFORM	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS01	SW8240	CHLOROMETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS01	SW8270	CHRYSENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8240	cis-1,2-DICHLOROETHYLENE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS01	SW8240	cis-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS01	SW8270	DI-n-BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS01	SW8270	DI-n-OCTYLPHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	DIBENZ(a,h) ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	DIBENZOFURAN	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8240	DIBROMOCHLOROMETHANE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS01	AK102	DIESEL RANGE ORGANICS	26.00	MG/KG	0.9000		
SS	SO-SS02-SS01	SW8270	DIETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	DIMETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8240	ETHYLBENZENE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS01	SW8270	FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	FLUORENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	AK101	GASOLINE RANGE ORGANICS	0.00	MG/KG	0.0800	U	
SS	SO-SS02-SS01	SW8270	HEXACHLOROBENZENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	HEXACHLOROBUTADIENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	HEXACHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	INDENO(1,2,3-c,d) PYRENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	ISOPHORONE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8240	METHYL ETHYL KETONE (2-BUTANONE)	0.00	MG/KG	0.0040	U	
SS	SO-SS02-SS01	SW8240	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	0.00	MG/KG	0.0020	U	
SS	SO-SS02-SS01	SW8240	METHYLENE CHLORIDE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS01	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	N-NITROSODIPHENYLAMINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	NAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	NITROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS01	SW8270	PENTACHLOROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	PHENANTHRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	PHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8270	PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS01	SW8240	STYRENE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS01	SW8240	TETRACHLOROETHYLENE (PCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS01	SW8240	TOLUENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS01	SW8240	TOTAL XYLENES	0.00	MG/KG	0.0030	U	
SS	SO-SS02-SS01	SW8240	trans-1,2-DICHLOROETHENE	0.00	MG/KG	0.0004	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS01	SW8240	trans-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS01	SW8240	TRICHLOROETHYLENE (TCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS01	SW8240	VINYL ACETATE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS01	SW8240	VINYL CHLORIDE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS02	SW8240	1,1,1-TRICHLOROETHANE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS02	SW8240	1,1,2,2-TETRACHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS02	SW8240	1,1,2-TRICHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS02	SW8240	1,1-DICHLOROETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS02-SS02	SW8240	1,1-DICHLOROETHENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS02	SW8270	1,2,4-TRICHLOROENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	1,2-DICHLOROENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8240	1,2-DICHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS02	SW8240	1,2-DICHLOROPROPANE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS02	SW8270	1,3-DICHLOROENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	1,4-DICHLOROENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2,4,5-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2,4,6-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2,4-DICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2,4-DIMETHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2,4-DINITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	2,4-DINITROTOLUENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	2,6-DINITROTOLUENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8240	2-CHLOROETHYL VINYL ETHER	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS02	SW8270	2-CHLORONAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2-CHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8240	2-HEXANONE	0.00	MG/KG	0.0030	U	
SS	SO-SS02-SS02	SW8270	2-METHYLNAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	2-NITROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	3,3'-DICHLOROBENZIDINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	3-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	MG/KG	0.2000	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS02	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	4-CHLOROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	MG/KG	0.3000	U	
SS	SO-SS02-SS02	SW8270	4-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	4-NITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	ACENAPHTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	ACENAPHTHYLENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8240	ACETONE	0.00	MG/KG	0.0090	U	
SS	SO-SS02-SS02	SW8270	ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8240	BENZENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS02	SW8270	BENZO(a)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	BENZO(a)PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	BENZO(b)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	BENZO(g,h,i)PERYLENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	BENZO(k)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	BENZOIC ACID	0.00	MG/KG	1.0000	U	
SS	SO-SS02-SS02	SW8270	BENZYL ALCOHOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	BENZYL BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.27	MG/KG	0.1000	J	NO1
SS	SO-SS02-SS02	SW8240	BROMODICHLOROMETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS02-SS02	SW8240	BROMOFORM	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS02	SW8240	BROMOMETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS02	SW8240	CARBON DISULFIDE	0.00	MG/KG	0.0020	J	
SS	SO-SS02-SS02	SW8240	CARBON TETRACHLORIDE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS02	SW8240	CHLOROBENZENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS02	SW8240	CHLOROETHANE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS02	SW8240	CHLOROFORM	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS02	SW8240	CHLOROMETHANE	0.00	MG/KG	0.0009	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS02	SW8270	CHRYSENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8240	cis-1,2-DICHLOROETHYLENE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS02	SW8240	cis-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS02	SW8270	Di-n-BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	Di-n-OCTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	DIBENZOFURAN	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8240	DIBROMOCHLOROMETHANE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS02	AK102	DIESEL RANGE ORGANICS	15.00	MG/KG	0.9000		
SS	SO-SS02-SS02	SW8270	DIETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	DIMETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8240	ETHYLBENZENE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS02	SW8270	FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	FLUORENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	AK101	GASOLINE RANGE ORGANICS	0.00	MG/KG	0.0800	U	
SS	SO-SS02-SS02	SW8270	HEXACHLORO BENZENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	HEXACHLORO BUTADIENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	HEXACHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	INDENO(1,2,3-c,d) PYRENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	ISOPHORONE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8240	METHYL ETHYL KETONE (2-BUTANONE)	0.00	MG/KG	0.0040	U	
SS	SO-SS02-SS02	SW8240	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	0.00	MG/KG	0.0020	U	
SS	SO-SS02-SS02	SW8240	METHYLENE CHLORIDE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS02	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	N-NITROSODIPHENYLAMINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	NAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	NITROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS02	SW8270	PENTACHLOROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	PHENANTHRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	PHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8270	PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS02	SW8240	STYRENE	0.00	MG/KG	0.0009	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS02	SW8240	TETRACHLOROETHYLENE (PCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS02	SW8240	TOLUENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS02	SW8240	TOTAL XYLENES	0.00	MG/KG	0.0030	U	
SS	SO-SS02-SS02	SW8240	trans-1,2-DICHLOROETHENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS02	SW8240	trans-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS02	SW8240	TRICHLOROETHYLENE (TCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS02	SW8240	VINYL ACETATE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS02	SW8240	VINYL CHLORIDE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS03	SW8240	1,1,1-TRICHLOROETHANE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS03	SW8240	1,1,2,2-TETRACHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS03	SW8240	1,1,2-TRICHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS03	SW8240	1,1-DICHLOROETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS02-SS03	SW8240	1,1-DICHLOROETHENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS03	SW8270	1,2,4-TRICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	1,2-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8240	1,2-DICHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS03	SW8240	1,2-DICHLOROPROPANE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS03	SW8270	1,3-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	1,4-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2,4,5-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2,4,6-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2,4-DICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2,4-DIMETHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2,4-DINITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	2,4-DINITROTOLUENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	2,6-DINITROTOLUENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8240	2-CHLOROETHYL VINYL ETHER	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS03	SW8270	2-CHLORONAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2-CHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8240	2-HEXANONE	0.00	MG/KG	0.0030	U	
SS	SO-SS02-SS03	SW8270	2-METHYLNAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	2-NITROANILINE	0.00	MG/KG	0.2000	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS03	SW8270	2-NITROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	3,3'-DICHLORO BENZIDINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	3-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	4-CHLOROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	MG/KG	0.3000	U	
SS	SO-SS02-SS03	SW8270	4-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	4-NITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	ACENAPHTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	ACENAPHTHYLENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8240	ACETONE	0.00	MG/KG	0.0090	U	
SS	SO-SS02-SS03	SW8270	ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8240	BENZENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS03	SW8270	BENZO(a)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	BENZO(a)PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	BENZO(b)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	BENZO(g,h,i)PERYLENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	BENZO(k)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	BENZOIC ACID	0.00	MG/KG	1.0000	U	
SS	SO-SS02-SS03	SW8270	BENZYL ALCOHOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	BENZYL BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8240	BROMODICHLOROMETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS02-SS03	SW8240	BROMOFORM	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS03	SW8240	BROMOMETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS03	SW8240	CARBON DISULFIDE	0.00	MG/KG	0.0020	U	
SS	SO-SS02-SS03	SW8240	CARBON TETRACHLORIDE	0.00	MG/KG	0.0008	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS03	SW8240	CHLOROBENZENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS03	SW8240	CHLOROETHANE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS03	SW8240	CHLOROFORM	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS03	SW8240	CHLOROMETHANE	0.00	MG/KG	0.0100	U	
SS	SO-SS02-SS03	SW8270	CHRYSENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8240	cis-1,2-DICHLOROETHYLENE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS03	SW8240	cis-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS03	SW8270	DI-n-BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	DI-n-OCTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	DIBENZOFURAN	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8240	DIBROMOCHLOROMETHANE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS03	AK102	DIESEL RANGE ORGANICS	23.00	MG/KG	0.9000		
SS	SO-SS02-SS03	SW8270	DIETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	DIMETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8240	ETHYLBENZENE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS03	SW8270	FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	FLUORENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	AK101	GASOLINE RANGE ORGANICS	0.00	MG/KG	0.0800	U	
SS	SO-SS02-SS03	SW8270	HEXACHLOROBENZENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	HEXACHLOROBUTADIENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	HEXACHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	INDENO(1,2,3-c,d) PYRENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	ISOPHORONE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8240	METHYL ETHYL KETONE (2-BUTANONE)	0.00	MG/KG	0.0040	U	
SS	SO-SS02-SS03	SW8240	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	0.00	MG/KG	0.0020	U	
SS	SO-SS02-SS03	SW8240	METHYLENE CHLORIDE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS03	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	N-NITROSODIPHENYLAMINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	NAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	NITROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS03	SW8270	PENTACHLOROPHENOL	0.00	MG/KG	0.1000	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS03	SW8270	PHENANTHRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	PHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8270	PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS03	SW8240	STYRENE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS03	SW8240	TETRACHLOROETHYLENE (PCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS03	SW8240	TOLUENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS03	SW8240	TOTAL XYLENES	0.00	MG/KG	0.0030	U	
SS	SO-SS02-SS03	SW8240	trans-1,2-DICHLOROETHENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS03	SW8240	trans-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS03	SW8240	TRICHLOROETHYLENE (TCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS03	SW8240	VINYL ACETATE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS03	SW8240	VINYL CHLORIDE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS04	SW8240	1,1,1-TRICHLOROETHANE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS04	SW8240	1,1,2,2-TETRACHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS04	SW8240	1,1,2-TRICHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS04	SW8240	1,1-DICHLOROETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS02-SS04	SW8240	1,1-DICHLOROETHENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS04	SW8270	1,2,4-TRICHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	1,2-DICHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8240	1,2-DICHLOROETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS04	SW8240	1,2-DICHLOROPROPANE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS04	SW8270	1,3-DICHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	1,4-DICHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2,4,5-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2,4,6-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2,4-DICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2,4-DIMETHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2,4-DINITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	2,4-DINITROTOLUENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	2,6-DINITROTOLUENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8240	2-CHLOROETHYL VINYL ETHER	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS04	SW8270	2-CHLORONAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2-CHLOROPHENOL	0.00	MG/KG	0.2000	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS04	SW8240	2-HEXANONE	0.00	MG/KG	0.0030	U	
SS	SO-SS02-SS04	SW8270	2-METHYLNAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	2-NITROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	3,3'-DICHLOROBENZIDINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	3-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	4-CHLOROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	MG/KG	0.3000	U	
SS	SO-SS02-SS04	SW8270	4-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	4-NITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	ACENAPHTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	ACENAPHTHYLENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8240	ACETONE	0.00	MG/KG	0.0090	U	
SS	SO-SS02-SS04	SW8270	ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8240	BENZENE	0.00	MG/KG	0.0006	U	
SS	SO-SS02-SS04	SW8270	BENZO(a)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	BENZO(a)PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	BENZO(b)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	BENZO(g,h,i)PERYLENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	BENZO(k)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	BENZOIC ACID	0.00	MG/KG	1.0000	U	
SS	SO-SS02-SS04	SW8270	BENZYL ALCOHOL	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	BENZYL BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8240	BROMODICHLOROMETHANE	0.00	MG/KG	0.0003	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS04	SW8240	BROMOFORM	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS04	SW8240	BROMOMETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS04	SW8240	CARBON DISULFIDE	0.00	MG/KG	0.0020	U	
SS	SO-SS02-SS04	SW8240	CARBON TETRACHLORIDE	0.00	MG/KG	0.0008	U	
SS	SO-SS02-SS04	SW8240	CHLOROBENZENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS04	SW8240	CHLOROETHANE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS04	SW8240	CHLOROFORM	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS04	SW8240	CHLOROMETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS04	SW8270	CHRYSENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8240	cis-1,2-DICHLOROETHYLENE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS04	SW8240	cis-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS04	SW8270	DI-n-BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	DI-n-OCTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	DIBENZOFURAN	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8240	DIBROMOCHLOROMETHANE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS04	AK102	DIESEL RANGE ORGANICS	0.00	MG/KG	0.9000	U	
SS	SO-SS02-SS04	SW8270	DIETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	DIMETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8240	ETHYLBENZENE	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS04	SW8270	FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	FLUORENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	AK101	GASOLINE RANGE ORGANICS	0.00	MG/KG	0.0800	U	
SS	SO-SS02-SS04	SW8270	HEXACHLOROBENZENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	HEXACHLOROBUTADIENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	HEXACHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	INDENO(1,2,3-c,d) PYRENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	ISOPHORONE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8240	METHYL ETHYL KETONE (2-BUTANONE)	0.00	MG/KG	0.0040	U	
SS	SO-SS02-SS04	SW8240	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	0.00	MG/KG	0.0020	U	
SS	SO-SS02-SS04	SW8240	METHYLENE CHLORIDE	0.00	MG/KG	0.0007	U	
SS	SO-SS02-SS04	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	MG/KG	0.2000	U	

TABLE A
Laboratory Results
Source Area SS02
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS02-SS04	SW8270	N-NITROSODIPHENYLAMINE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	NAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	NITROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS02-SS04	SW8270	PENTACHLOROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	PHENANTHRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	PHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8270	PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS02-SS04	SW8240	STYRENE	0.00	MG/KG	0.0009	U	
SS	SO-SS02-SS04	SW8240	TETRACHLOROETHYLENE (PCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS04	SW8240	TOLUENE	0.00	MG/KG	0.0004	J	
SS	SO-SS02-SS04	SW8240	TOTAL XYLENES	0.00	MG/KG	0.0030	J	
SS	SO-SS02-SS04	SW8240	trans-1,2-DICHLOROETHENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS04	SW8240	trans-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0004	U	
SS	SO-SS02-SS04	SW8240	TRICHLOROETHYLENE (TCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS02-SS04	SW8240	VINYL ACETATE	0.00	MG/KG	0.0010	U	
SS	SO-SS02-SS04	SW8240	VINYL CHLORIDE	0.00	MG/KG	0.0010	U	

Notes:

J = estimated
MG/KG = milligrams per kilogram
NO1 = laboratory contaminant
SS = surface soil
U = undetected (analyzed for but undetected)

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: LDC ID SS02-SS01

SAMPLE ID: SS02-SS01

LOT CONTROL NO. A1014

DATE: 8/8/95

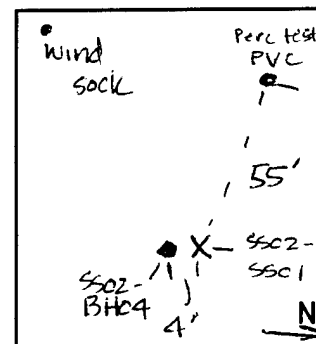
TIME: 1140

WEATHER: overcast, 60°F

FIELD SAMPLING TEAM: S. Brown, R. Henry

SAMPLING LOCATION:

btw SS02-BH04 and percolation test pipe



COMPOSITE: YES/NO

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: 0-1"

VOLUME COLLECTED: 2 8 oz jars for

HEADSPACE READINGS: 0 ppm/background

VOC, SVOC, DRO & GR0

DESCRIPTION OF SOIL MATERIALS:

light brown, fine-grained silty soil with gravel. lack of vegetation

2 8 oz jars filled for VOC, SVOC, GR0, DRO analyses

FIELD TEST KIT SCREENING

TPH: _____

PCB: _____

SAMPLE IDS:

RESULTS:

DATE AND TIME OF
TEST KIT SCREENING _____

COMPLETED BY:

Sarah Brown

Sarah Brown

8/8/95

PRINT NAME

SIGNATURE

DATE

CHECKED BY:

PRINT NAME

SIGNATURE

DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200 ^{SB}

SITE ID: LOC ID 5502-45072

SAMPLE ID: 50-4502-45072

DATE: 8/8/95

WEATHER: cloudy, 60°F

FIELD SAMPLING TEAM: S. Brown, R. Henry

SAMPLING LOCATION:

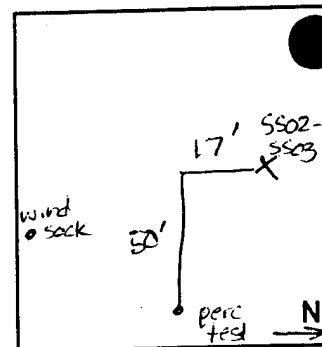
NW of percolation test pipe

LOT CONTROL NO. A1015 SB

A1016 SB

TIME: 1201

1201



COMPOSITE:

YES/NO

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: 0-1"

VOLUME COLLECTED: 2 8oz jars for

HEADSPACE READINGS: _____

VOCs, SVOCs, DRO, G120

DESCRIPTION OF SOIL MATERIALS:

medium brown, silty soil with gravel. no vegetation

2 8 oz jars collected for VOC, SVOC, GRO, DRO

FIELD TEST KIT SCREENING TPH: _____ PCB: _____

SAMPLE IDS:

RESULTS:

DATE AND TIME OF
TEST KIT SCREENING _____

COMPLETED BY:

Sarah Brown Sarah Brown 8/8/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: LOC ID SS02-SS02³ SB

SAMPLE ID: SS02-SS02-SS02³ SB

LOT CONTROL NO. A1015

DATE: 8/8/95

TIME: 1149

WEATHER: cloudy 60° F

FIELD SAMPLING TEAM: S. Brown, R. Henry

SAMPLING LOCATION:

6' east of SS02-BH06, 117' east of percolation test pipe

COMPOSITE: YES/NO

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: 0-1"

VOLUME COLLECTED: 2 8 oz jars for

HEADSPACE READINGS: background

VOCs, SVOCs, GRC, DRC

DESCRIPTION OF SOIL MATERIALS:

light brown, fine grained, silty soil, less gravelly than SS01.

Area is disturbed from previous disturbance, limited/no vegetation

2 8 oz jars collected for ^{SB} VOC, SVOC, GRC, DRC

FIELD TEST KIT SCREENING TPH: _____

PCB: _____

SAMPLE IDS:

RESULTS:

DATE AND TIME OF
TEST KIT SCREENING _____

COMPLETED BY:

Sarah Brown
PRINT NAME

Sarah Brown
SIGNATURE

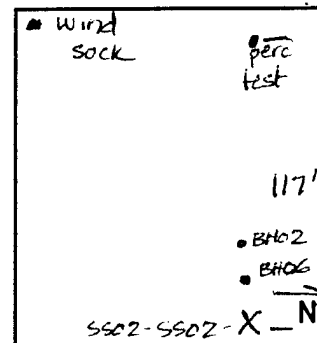
8/8/95
DATE

CHECKED BY:

PRINT NAME

SIGNATURE

DATE



SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: Loc ID SS02-SS04

SAMPLE ID: SS02-SS04

LOT CONTROL NO. A1017

DATE: 8/8/95

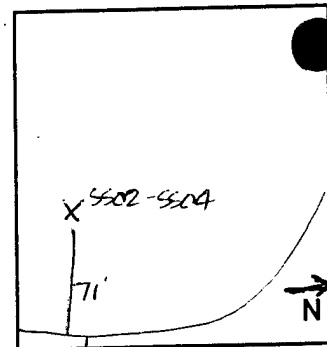
TIME: 1210

WEATHER: overcast 60°F

FIELD SAMPLING TEAM: S. Brown, R. Henry

SAMPLING LOCATION:

71' west of ditch adjacent to road



COMPOSITE:

YES/NO

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: C-1"

VOLUME COLLECTED: 2 8 oz for
VOCs, SVOCs, GRG, DRG

HEADSPACE READINGS: background

DESCRIPTION OF SOIL MATERIALS:

mid/light brown, fine grained, silty w/gravel. No vegetation

2 8 oz jars collected for VOC, SVOC, GRG, DRG

FIELD TEST KIT SCREENING TPH: _____ PCB: _____

SAMPLE IDS:

RESULTS:

DATE AND TIME OF
TEST KIT SCREENING _____

COMPLETED BY:

Sarah Brown
PRINT NAME

Sarah Brown
SIGNATURE

8/8/95
DATE

CHECKED BY:

PRINT NAME

SIGNATURE

DATE

APPENDIX B
OT08 LABORATORY RESULTS
OT08 SAMPLING FORMS

TABLE B
Laboratory Results
Source Area OT08
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Sample Depth (ft)	Analyte	Value	Units	Detection Limit	Lab Qualifier
SO	SO-OT08-SB03	SW8080	4.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SB03	SW8080	4.50	PCB-1221 (AROCCLOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SB03	SW8080	4.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB03	SW8080	4.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SB03	SW8080	4.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB03	SW8080	4.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB03	SW8080	4.50	PCB-1260 (AROCCLOR 1260)	0.00	MG/KG	0.0080	U
SO	SO-OT08-SB04	SW8080	2.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB04	SW8080	2.50	PCB-1221 (AROCCLOR 1221)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB04	SW8080	2.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB04	SW8080	2.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB04	SW8080	2.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB04	SW8080	2.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB04	SW8080	2.50	PCB-1260 (AROCCLOR 1260)	0.00	MG/KG	0.0080	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1221 (AROCCLOR 1221)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1221 (AROCCLOR 1221)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1221 (AROCCLOR 1221)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SB05	SW8080	2.50	PCB-1260 (AROCCLOR 1260)	0.04	MG/KG	0.0080	J
SO	SO-OT08-SB05	SW8080	2.50	PCB-1260 (AROCCLOR 1260)	0.04	MG/KG	0.0080	J
SO	SO-OT08-SB05	SW8080	2.50	PCB-1260 (AROCCLOR 1260)	0.04	MG/KG	0.0080	J

TABLE B
Laboratory Results
Source Area OT08
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Sample Depth (ft)	Analyte	Value	Units	Detection Limit	Lab Qualifier
SO	SO-OT08-SB06	SW8080	2.50	PCB-1016 (AROCOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SB06	SW8080	2.50	PCB-1221 (AROCOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SB06	SW8080	2.50	PCB-1232 (AROCOR 1232)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB06	SW8080	2.50	PCB-1242 (AROCOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SB06	SW8080	2.50	PCB-1248 (AROCOR 1248)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB06	SW8080	2.50	PCB-1254 (AROCOR 1254)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SB06	SW8080	2.50	PCB-1260 (AROCOR 1260)	0.00	MG/KG	0.0090	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1016 (AROCOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1016 (AROCOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1221 (AROCOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1221 (AROCOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1232 (AROCOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1232 (AROCOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1242 (AROCOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1242 (AROCOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1248 (AROCOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1248 (AROCOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1254 (AROCOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1254 (AROCOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1260 (AROCOR 1260)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS08	SW8080	0.50	PCB-1260 (AROCOR 1260)	0.09	MG/KG	0.0090	J
SO	SO-OT08-SS08	SW8080	0.50	PCB-1260 (AROCOR 1260)	0.10	MG/KG	0.0090	J
SO	SO-OT08-SS10	SW8080	0.50	PCB-1016 (AROCOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1016 (AROCOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1221 (AROCOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1221 (AROCOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1232 (AROCOR 1232)	0.00	MG/KG	0.0200	U

TABLE B
Laboratory Results
Source Area OT08
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Sample Depth (ft)	Analyte	Value	Units	Detection Limit	Lab Qualifier
SO	SO-OT08-SS10	SW8080	0.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1260 (AROCCLOR 1260)	0.00	MG/KG	0.0080	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1260 (AROCCLOR 1260)	0.00	MG/KG	0.0080	U
SO	SO-OT08-SS10	SW8080	0.50	PCB-1260 (AROCCLOR 1260)	0.00	MG/KG	0.0080	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1016 (AROCCLOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1221 (AROCCLOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1221 (AROCCLOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1232 (AROCCLOR 1232)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1242 (AROCCLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1248 (AROCCLOR 1248)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1254 (AROCCLOR 1254)	0.00	MG/KG	0.0200	U
SO	SO-OT08-SS12	SW8080	0.50	PCB-1260 (AROCCLOR 1260)	0.20	MG/KG	0.0090	J
SO	SO-OT08-SS12	SW8080	0.50	PCB-1260 (AROCCLOR 1260)	0.19	MG/KG	0.0090	J
SO	SO-OT08-SS12	SW8080	0.50	PCB-1260 (AROCCLOR 1260)	0.20	MG/KG	0.0090	J

TABLE B
Laboratory Results
Source Area OT08
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Sample Depth (ft)	Analyte	Value	Units	Detection Limit	Lab Qualifier
SO	SO-OT08-SS13	SW8080	0.50	PCB-1016 (AROCOLOR 1016)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS13	SW8080	0.50	PCB-1221 (AROCOLOR 1221)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS13	SW8080	0.50	PCB-1232 (AROCOLOR 1232)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SS13	SW8080	0.50	PCB-1242 (AROCOLOR 1242)	0.00	MG/KG	0.0400	U
SO	SO-OT08-SS13	SW8080	0.50	PCB-1248 (AROCOLOR 1248)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SS13	SW8080	0.50	PCB-1254 (AROCOLOR 1254)	0.00	MG/KG	0.0300	U
SO	SO-OT08-SS13	SW8080	0.50	PCB-1260 (AROCOLOR 1260)	0.00	MG/KG	0.0090	U
SS	SO-OT08-SB12	SW9081	0.05	CATION-EXCHANGE CAPACITY	32.00	MEQ/100G	5.0000	
SS	SO-OT08-SB12	SWD422	0.05	CLAY PERCENT	4.00	%		
SO	SO-OT08-SB12	D2216	0.05	PERCENT MOISTURE	7.70	PERCENT	0.0000	
SS	SO-OT08-SB12	SWD5084	0.05	PERMEABILITY	3.4E-06	CM/SEC		
SS	SO-OT08-SB12	SWD422	0.05	SAND PERCENT	9.00	%		
SS	SO-OT08-SB12	SWD422	0.05	SILT PERCENT	13.00	%		
SO	SO-OT08-SB12	D2487	0.05	SOIL CLASSIFICATION	BSG	N/A	N/A	
SO	SO-OT08-SB12	D854	0.05	SPECIFIC GRAVITY	2.75	MG/KG	0.0000	
SS	SO-OT08-SB12	SW9060	0.05	TOTAL ORGANIC CARBON	480.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.05	TOTAL ORGANIC CARBON	600.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.05	TOTAL ORGANIC CARBON	440.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.05	TOTAL ORGANIC CARBON	430.00	MG/KG	22.0000	
SS	SO-OT08-SB12	SW9060	0.05	TOTAL ORGANIC CARBON	440.00	MG/KG	22.0000	
SS	SO-OT08-SB13	SW9081	0.05	CATION-EXCHANGE CAPACITY	30.00	MEQ/100G	5.0000	
SS	SO-OT08-SB13	SWD422	0.05	CLAY PERCENT	4.00	%		
SO	SO-OT08-SB13	D2216	0.05	PERCENT MOISTURE	26.00	PERCENT	0.0000	
SS	SO-OT08-SB13	SWD5084	0.05	PERMEABILITY	7.3E-07	CM/SEC		
SS	SO-OT08-SB13	SWD422	0.05	SAND PERCENT	11.00	%		
SS	SO-OT08-SB13	SWD422	0.05	SILT PERCENT	14.00	%		
SO	SO-OT08-SB13	D2487	0.05	SOIL CLASSIFICATION	BSG/S	N/A	N/A	
SO	SO-OT08-SB13	D854	0.05	SPECIFIC GRAVITY	2.72	MG/KG	0.0000	
SS	SO-OT08-SB13	SW9060	0.05	TOTAL ORGANIC CARBON	500.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.05	TOTAL ORGANIC CARBON	500.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.05	TOTAL ORGANIC CARBON	490.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.05	TOTAL ORGANIC CARBON	510.00	MG/KG	27.0000	
SS	SO-OT08-SB13	SW9060	0.05	TOTAL ORGANIC CARBON	510.00	MG/KG	27.0000	
SS	SO-OT08-SB14	SW9081	0.05	CATION-EXCHANGE CAPACITY	35.00	MEQ/100G	5.0000	
SS	SO-OT08-SB14	SWD422	0.05	CLAY PERCENT	5.00	%		

TABLE B
Laboratory Results
Source Area OT08
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Sample Depth (ft)	Analyte	Value	Units	Detection Limit	Lab Qualifier
SO	SO-OT08-SB14	D2216	0.05	PERCENT MOISTURE	16.00	PERCENT	0.0000	
SS	SO-OT08-SB14	SWD5084	0.05	PERMEABILITY	NA	CM/SEC		
SS	SO-OT08-SB14	SWD422	0.05	SAND PERCENT	15.00	%		
SS	SO-OT08-SB14	SWD422	0.05	SILT PERCENT	31.00	%		
SO	SO-OT08-SB14	D2487	0.05	SOIL CLASSIFICATION	BSS/G	N/A	N/A	
SO	SO-OT08-SB14	D854	0.05	SPECIFIC GRAVITY	2.70	MG/KG	0.0000	
SS	SO-OT08-SB14	SW9060	0.05	TOTAL ORGANIC CARBON	450.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.05	TOTAL ORGANIC CARBON	500.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.05	TOTAL ORGANIC CARBON	450.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.05	TOTAL ORGANIC CARBON	430.00	MG/KG	10.0000	
SS	SO-OT08-SB14	SW9060	0.05	TOTAL ORGANIC CARBON	420.00	MG/KG	10.0000	

Notes:

BSG = brown silty gravel
BSG/S = brown silty gravel with sand
BSS/G = brown silty sand with gravel
CM/SEC = centimeters per second
E = exponent
ft = feet
J = estimated

MEQ/100G = milliequivalent weights per 100 grams
MG/KG = milligrams per kilogram
SO = soil
SS = surface soil
U = undetected (analyzed but not detected)
% = percent

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: OT08

OT08-SS08 Loc ID

SAMPLE ID: 50-OT08-SS08

LOT CONTROL NO. IN-A10001

DATE: 8/11/95

TIME: 1030

WEATHER: Overcast, 50

FIELD SAMPLING TEAM: S. Brown, B. Davidson

SAMPLING LOCATION: Lab sample collected from 0.5-1' depth

Approx 50' south of the COR1 marker on the
south side of OT08. Location is across roadway from COR1.

COMPOSITE: ☒ YES ☐ NO

COMPOSITE DESCRIPTION: collection of soils from one depth

DEPTH OF SAMPLING INTERVAL: 0.5-1', 2.5-3', 4.5-5' VOLUME COLLECTED: 1 4oz jar &

HEADSPACE READINGS: _____

3 test kit samples
- all for PCB analysis

DESCRIPTION OF SOIL MATERIALS:

Medium brown silty soil with 40% gravel and angular
boulders. Did not encounter bedrock or water. ~~the~~ Water
did slowly seep in from bottom.

FIELD TEST KIT SCREENING TPH: _____ PCB: ☒ Aroclor 1260

SAMPLE IDS:

RESULTS:

SS08 - 01	ND, < 1ppm
SS08 - 02	NA ND 8/12/95
SS08 - 03	NA
	ND = none detected
	NA = not analyzed

DATE AND TIME OF
TEST KIT SCREENING 1530 8/11/95 (8/12/95)

COMPLETED BY:

Sarah Brown

Sarah Brown

8/11/95

PRINT NAME

SIGNATURE

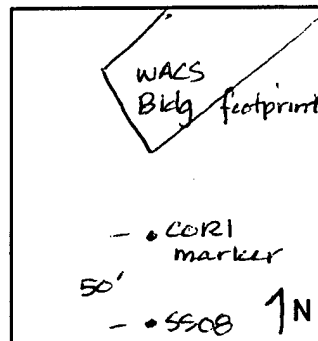
DATE

CHECKED BY:

PRINT NAME

SIGNATURE

DATE



SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRSS

PROJECT NUMBER: 05G46200

LOC ID OT08-SS09

SITE ID: OT08

SAMPLE ID: SO-OT08-SB03

LOT CONTROL NO. IN-A100101

DATE: 8/11/95

TIME: 1045

WEATHER: Overcast, 50°F

FIELD SAMPLING TEAM: S. Brown, B. Davidson

SAMPLING LOCATION: Lab sample collected from 4.5-5' depth

Approx 130' SE of COR1 marker on south side
of OT08. Near area of former diesel tanks

COMPOSITE: (YES) NO

COMPOSITE DESCRIPTION: A collection of soil from each depth
0.5-1', 2.5-3'
and 4.5-5'

DEPTH OF SAMPLING INTERVAL: and 4.5-5' VOLUME COLLECTED: 1 4oz and

HEADSPACE READINGS: _____

3 20g test kit samples
- all for PCB analysis

DESCRIPTION OF SOIL MATERIALS:

Gray, silty/clayey, moist soils with 40-50% gravel and
boulders. Sheen on soils and strong degraded fuel odor.
Water trickled in about 1' bgs. Bedrock not encountered

FIELD TEST KIT SCREENING TPH: _____ PCB: X Aroclor 1260

SAMPLE IDS:

RESULTS:

<u>SS09-01</u>	<u>>1, <10 ppm</u>
<u>SS09-02</u>	<u>NA ND 8/12/95</u>
<u>SS09-03</u>	<u>NA</u>
	<u>NA= not analyzed</u>
	<u>ND= not detected</u>

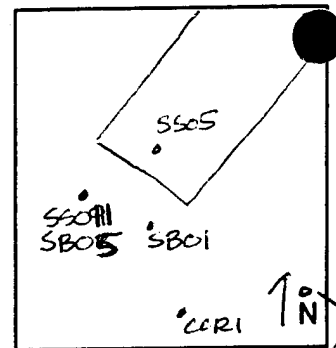
DATE AND TIME OF
TEST KIT SCREENING 8/11/95 1530

COMPLETED BY:

Sarah Brown Sarah Brown 8/11/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE



SS09
SB03

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

Loc ID OT08-SS10

PROJECT NUMBER: 05G46200

SITE ID: OT08

IN-A100201

SAMPLE ID: SO-OT08-SS10 and LOT CONTROL NO. IN-A100301

DATE: 8/11/95 SO-OT08-SB04 TIME: 1221 ± 1224 (1228.00)
COC.

WEATHER: Overcast, 50°F

FIELD SAMPLING TEAM: S. Brown, R. Henry

SAMPLING LOCATION: Lab samples collected from 0.5-1' and 2.5-3.0' depths

Approx. 80' west of SB01 ± 60' south of COR4
marker.

COMPOSITE: YES/NO

COMPOSITE DESCRIPTION: Collection of soils from each interval, between rocks

DEPTH OF SAMPLING INTERVAL: 0.5-1', 2.5-3', and 4.5-5'

VOLUME COLLECTED: 1-4oz for each lab sample
± 20g for each test kit
all for PCB analysis

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Permafrost and fractured bedrock were encountered at 5' bgs.
No major water seepage observed. Gray, silty soil with
50% gravel and boulders.

FIELD TEST KIT SCREENING TPH: _____ PCB: X Aroclor 1260

SAMPLE IDS:

RESULTS:

<u>SS10-01</u>	<u>ND</u>
<u>SS10-02</u>	<u>ND</u>
<u>SS10-03</u>	<u>ND</u>
	<u>ND = not detected</u>

DATE AND TIME OF
TEST KIT SCREENING 8/11 ± 8/12/95

COMPLETED BY:

Sarah Brown

Sarah Brown

8/11/95

PRINT NAME

SIGNATURE

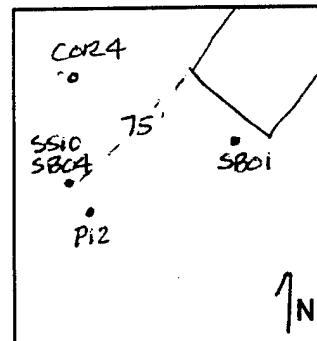
DATE

CHECKED BY:

PRINT NAME

SIGNATURE

DATE



SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

LOC ID OT08-SS11

SITE ID: OT08

SAMPLE ID: SO-OT08-SB05

LOT CONTROL NO. IN-A100401

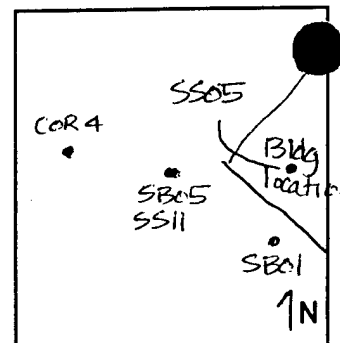
DATE: 8/11/95

TIME: 1247 (1250 on COC)

WEATHER: Overcast, 50°F

FIELD SAMPLING TEAM: S. Brown, R. Henry

SAMPLING LOCATION: Lab sample collected from 2.5-3' depth east of COR4 and west of SS05 (1994 location)



COMPOSITE: (YES/NO) COMPOSITE DESCRIPTION: collection of soils at the specific depth.

DEPTH OF SAMPLING INTERVAL: 0.5-1', 2.5-3' and 4.5-5' VOLUME COLLECTED: 1-4oz jar for lab

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Soil/rock composition^{SB} is similar to other pits. Permafrost and fractured bedrock were encountered at 5' bgs. Soil became moist and 4.5'. Very rocky throughout pit.

FIELD TEST KIT SCREENING TPH: _____ PCB: X Aroclor 1260

SAMPLE IDS:	RESULTS:
SS11-01	> 1, < 10 ppm
SS11-02	ND
SS11-03	NA
	ND = not detected NA = not analyzed

DATE AND TIME OF TEST KIT SCREENING 8/11/95

COMPLETED BY:

Sarah Brown Sarah Brown 8/11/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

Loc ID OT08-SS12

SITE ID: OT08

SAMPLE ID: SO-OT08-SS12

LOT CONTROL NO. 1N-A100501

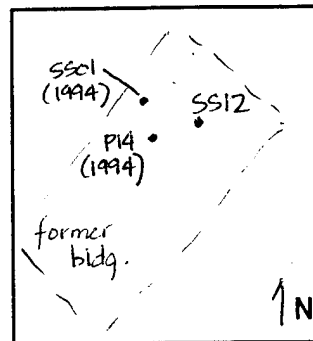
DATE: 8/11/95

TIME: 1310

WEATHER: Overcast 50°F

FIELD SAMPLING TEAM: S. Brown, R. Henry

SAMPLING LOCATION: Lab sample collected from 0.5 - 1' depth location is SE of 1994 location SS01. Location is near proposed diversion ditch path



COMPOSITE: ☒ YES ☐ NO

COMPOSITE DESCRIPTION: Soils composited at each interval

DEPTH OF SAMPLING INTERVAL: 0.5 - 1'

VOLUME COLLECTED: 1-4oz for lab

HEADSPACE READINGS: _____

1-2oz for test kit
- all for PCB analysis

DESCRIPTION OF SOIL MATERIALS:

Fine-grained, med. brown silty soil with some gravel and construction debris, cables and wood. Finished excavation at 2' bgs because excessive building debris was encountered.

FIELD TEST KIT SCREENING TPH: _____ PCB: X Aradon 1260

SAMPLE IDS:

RESULTS:

SS12 - 01	Not detected

DATE AND TIME OF TEST KIT SCREENING 8/11/95

COMPLETED BY:

Sarah Brown Sarah Brown 8/11/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

LOC ID SS13

SITE ID: OT08

SAMPLE ID: SO-OT08-SS13 LOT CONTROL NO. IN-A100601

DATE: 8/11/95 and SO-OT08-SB06 TIME: 1326 & 1332

WEATHER: overcast, 50°F

FIELD SAMPLING TEAM: S. Brown and R. Henry

SAMPLING LOCATION: Lab samples collected from 0.5-1' and 2.5-3' bgs

NW side of OT08 and 1994 location SS01.

NW of diversion ditch.

COMPOSITE: (YES/NO)

COMPOSITE DESCRIPTION: Soils were composited at each interval

DEPTH OF SAMPLING INTERVAL: 0.5-1', 2.5-3', and 4.5-5' VOLUME COLLECTED: 1-4oz for each lab sample

HEADSPACE READINGS: _____

and 20g for test kits
- all for PCB analysis

DESCRIPTION OF SOIL MATERIALS:

Heavy degraded fuel odor and sheen on gray silty/clayey
soils containing 70-75% gravel and small boulders. Water

was encountered about 4' bgs. Six inches of peat material
at surface

FIELD TEST KIT SCREENING TPH: _____ PCB: X Arclor 1760

SAMPLE IDS:

RESULTS:

<u>SS13-01</u>	<u>ND</u>
<u>SS13-02</u>	<u>ND</u>
<u>SS13-03</u>	<u>NA</u>
	<u>ND = not detected</u>
	<u>NA = not analyzed</u>

DATE AND TIME OF
TEST KIT SCREENING 8/11/95

COMPLETED BY:

Sarah Brown

Sarah Brown

8/11/95

PRINT NAME

SIGNATURE

DATE

CHECKED BY:

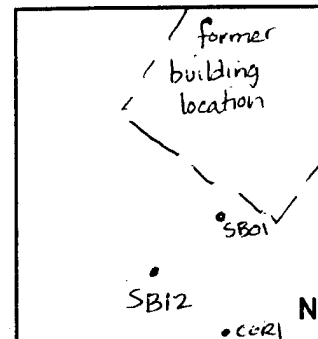
PRINT NAME

SIGNATURE

DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS Geotech Sample
 PROJECT NUMBER: 05G46200
 SITE ID: OT08 Loc ID: OT08-SB12
 SAMPLE ID: 50-OT08-SB12 LOT CONTROL NO. IN-A1018
 DATE: 8/13/95 TIME: 1229
 WEATHER: 50°F, windy, cloudy
 FIELD SAMPLING TEAM: R. Henry, Samer Karmi
 SAMPLING LOCATION:



50' south(w) of 1994 location OT08-SB12

COMPOSITE: YES/NO COMPOSITE DESCRIPTION: _____
 DEPTH OF SAMPLING INTERVAL: 0.5' VOLUME COLLECTED: 2-16 oz jars
2-1 steel sleeve

HEADSPACE READINGS: _____ Geotechnical analyses: D2216,
D2434, D2487, D422, DE54, SWA060,
 DESCRIPTION OF SOIL MATERIALS: SW906

The steel sleeve was submitted as an undisturbed
sample. Analyses include: % moisture, permeability, particle size
analysis, bulk density, total organic carbon, cation-exchange capacity,
and soil classification.

FIELD TEST KIT SCREENING TPH: _____ PCB: _____

SAMPLE IDS:	RESULTS:

DATE AND TIME OF TEST KIT SCREENING _____

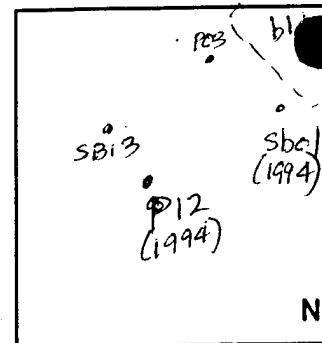
COMPLETED BY:
Sarah Brown Sarah Brown 8/13/95
 PRINT NAME SIGNATURE DATE

CHECKED BY:

 PRINT NAME SIGNATURE DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS *Geotech sample*
 PROJECT NUMBER: 05G46200
 SITE ID: OT08 LOC ID: OT08-SB13
 SAMPLE ID: SO-OT08-SB13 LOT CONTROL NO. IN-A1019
 DATE: 8/13/95 TIME: 1525
 WEATHER: cloudy, 50%, breezy
 FIELD SAMPLING TEAM: J. Henry & S. Karmi



SAMPLING LOCATION:

25' south of test pit SS10, where samples
SO-OT08-SS10 & -SB04 were collected.

COMPOSITE: YES ☒ NO COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: 0.5' VOLUME COLLECTED: 2-16oz jars & one
galvanized steel sleeve.

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Analyses: D2216, D2434, D2487,
D422, D854, SW9060, SW9091

The steel sleeve was submitted as an undisturbed sample
Geotech. Analyses are: % moisture, permeability, particle size analysis,
bulk density, total organic carbon, cation-exchange capacity,
and soil classification.

FIELD TEST KIT SCREENING TPH: _____ PCB: _____

SAMPLE IDS:

RESULTS:

DATE AND TIME OF
TEST KIT SCREENING _____

COMPLETED BY:

Sarah Brown Sarah Brown 8/13/95
 PRINT NAME SIGNATURE DATE

CHECKED BY:

 PRINT NAME SIGNATURE DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: OT08

LOC ID: OT08-SB14

SAMPLE ID: SC-OT08-SB14

LOT CONTROL NO. IN-A1020

DATE: 8/13/95

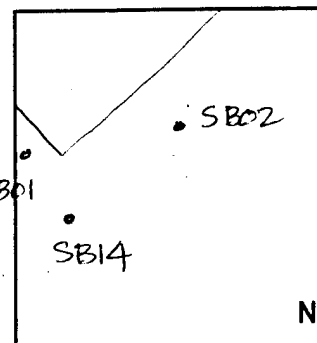
TIME: 1538

WEATHER: cloudy, 50° F, breezy

FIELD SAMPLING TEAM: R. Henry, S. Karmi

SAMPLING LOCATION:

30' ^{SE} of 1994 and 1995 location ~~SBox2~~ ^{SB} SBC1



COMPOSITE: YES/NO

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: 0.5'

VOLUME COLLECTED: 2-16oz jars

HEADSPACE READINGS: _____

could not collect a sleeve

DESCRIPTION OF SOIL MATERIALS:

we will see what analyses the

lab can run
Analyses may include % moisture, permeability, particle size
analysis, bulk density, total organic carbon, cation
exchange capacity, and soil classification.

FIELD TEST KIT SCREENING TPH: _____

PCB: _____

SAMPLE IDS:

RESULTS:

DATE AND TIME OF
TEST KIT SCREENING _____

COMPLETED BY:

Sarah Brown

Sarah Brown

8/13/95

PRINT NAME

SIGNATURE

DATE

CHECKED BY:

PRINT NAME

SIGNATURE

DATE

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: OT08

SAMPLE ID: variety/no lab LOT CONTROL NO. _____

DATE: 8/9/95 TIME: 1145-1315

WEATHER: cloudy, breezy, 50°F

FIELD SAMPLING TEAM: S. Brown & R. Henry

SAMPLING LOCATION:

1st two were along the road between the last switchback and Top Camp. 3rd & 4th were on north side of lower bench

COMPOSITE: YES/NO COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: 0-6", 2.5', 5' VOLUME COLLECTED: 20g each

HEADSPACE READINGS: not meas'd

DESCRIPTION OF SOIL MATERIALS:

med to dark brown silty soils with occasional clay nodules that are gray. typical to observe fuel sheen & degraded fuel odor. H₂O at 2-2.5' in SS05 SB01, & SB02; at 4-5' in new1; not encountered in new2. Permafrost was encountered in new2 at

FIELD TEST KIT SCREENING TPH: _____ PCB: X Arceclor 1260 4-5' Bedrock
RESULTS: at 5' in new1.

SAMPLE IDS:

SB01 - same location as 1994	Surf->10, <40; 2.5'->40; 5' - ND
SB02 - "	surf. > 40; 2.5' > 40; 5' - >40
SS05 - "	surf. > 40; 2.5' > 1, <10; 5' - NA
New1 - 20' SE of SB02	Surf. >10, <40; 2.5' - ND; 5' - NA
New2 - 35' SE of pond	surf ND; 2.5' ND; 5' - NA

Detection limits
1, 10, 40 ppm

DATE AND TIME OF
TEST KIT SCREENING 8/9 7-10:30 and
8/10 8-9 am

COMPLETED BY:

Sarah Brown Sarah Brown SB 8/10/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE

APPENDIX C
SS09 LABORATORY RESULTS
SS09 SAMPLING FORMS

TABLE C
Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-MW01-02	SW8260	1,1,1,2-TETRACHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW01-02	SW8260	1,1,1-TRICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	1,1,2,2-TETRACHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	1,1,2-TRICHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	1,1-DICHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW01-02	SW8260	1,1-DICHLOROETHENE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	1,2-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	1,2-DICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	1,2-DICHLOROPROPANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	1,3-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	1,4-DICHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW01-02	SW8260	1-CHLOROHEXANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	BENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW01-02	SW8260	BROMOBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	BROMODICHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	BROMOFORM	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	BROMOMETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW01-02	SW8260	CARBON TETRACHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	CHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW01-02	SW8260	CHLOROETHANE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW01-02	SW8260	CHLOROFORM	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	CHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	cis-1,2-DICHLOROETHYLENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	DIBROMOCHLOROMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	DIBROMOMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	AK102	DIESEL RANGE ORGANICS	2.00	MG/L	0.1000	J
WG	WG-SS09-MW01-02	SW8260	ETHYLBENZENE	1.30	UG/L	0.3000	J
WG	WG-SS09-MW01-02	AK101	GASOLINE RANGE ORGANICS	560.00	UG/L	70.0000	
WG	WG-SS09-MW01-02	SW8260	METHYLENE CHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	STYRENE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW01-02	SW8260	TETRACHLOROETHYLENE (PCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW01-02	SW8260	TOLUENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	TOTAL XYLENES	5.50	UG/L	0.3000	

TABLE C
Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-MW01-02	SW8260	trans-1,2-DICHLOROETHENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW01-02	SW8260	TRICHLOROETHYLENE (TCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW01-02	SW8260	TRICHLOROFLUOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW01-02	SW8260	VINYL CHLORIDE	0.00	UG/L	0.1000	U
WG	WG-SS09-MW02-02	SW8260	1,1,1,2-TETRACHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW02-02	SW8260	1,1,1-TRICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	1,1,2,2-TETRACHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	1,1,2-TRICHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	1,1-DICHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW02-02	SW8260	1,1-DICHLOROETHENE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	1,2-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	1,2-DICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	1,2-DICHLOROPROPANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	1,3-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	1,4-DICHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW02-02	SW8260	1-CHLOROHEXANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	BENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW02-02	SW8260	BROMOBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	BROMODICHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	BROMOFORM	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	BROMOMETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW02-02	SW8260	CARBON TETRACHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	CHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW02-02	SW8260	CHLOROETHANE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW02-02	SW8260	CHLOROFORM	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	CHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	cis-1,2-DICHLOROETHYLENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	DIBROMOCHLOROMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	DIBROMOMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	AK102	DIESEL RANGE ORGANICS	0.08	MG/L	0.0200	J
WG	WG-SS09-MW02-02	SW8260	ETHYLBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	AK101	GASOLINE RANGE ORGANICS	0.00	UG/L	70.0000	U
WG	WG-SS09-MW02-02	SW8260	METHYLENE CHLORIDE	0.00	UG/L	0.4000	U

TABLE C
Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-MW02-02	SW8260	STYRENE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW02-02	SW8260	TETRACHLOROETHYLENE (PCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW02-02	SW8260	TOLUENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	TOTAL XYLENES	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	trans-1,2-DICHLOROETHENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW02-02	SW8260	TRICHLOROETHYLENE (TCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW02-02	SW8260	TRICHLOROFLUOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW02-02	SW8260	VINYL CHLORIDE	0.00	UG/L	0.1000	U
WG	WG-SS09-MW03-02	SW8260	1,1,1,2-TETRACHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW03-02	SW8260	1,1,1-TRICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	1,1,2,2-TETRACHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	1,1,2-TRICHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	1,1-DICHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW03-02	SW8260	1,1-DICHLOROETHENE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	1,2-DICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	1,2-DICHLOROPROPANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	1,3-DICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	1,4-DICHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW03-02	SW8260	1-CHLOROHEXANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	BENZENE	3.50	UG/L	0.2000	
WG	WG-SS09-MW03-02	SW8260	BROMOBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	BROMODICHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	BROMOFORM	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	BROMOMETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW03-02	SW8260	CARBON TETRACHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	CHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW03-02	SW8260	CHLOROETHANE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW03-02	SW8260	CHLOROFORM	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	CHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	cis-1,2-DICHLOROETHYLENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	DIBROMOCHLOROMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	DIBROMOMETHANE	0.00	UG/L	0.3000	U

TABLE C
Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-MW03-02	AK102	DIESEL RANGE ORGANICS	0.82	MG/L	0.0200	J
WG	WG-SS09-MW03-02	SW8260	ETHYLBENZENE	0.68	UG/L	0.3000	J
WG	WG-SS09-MW03-02	AK101	GASOLINE RANGE ORGANICS	230.00	UG/L	70.0000	
WG	WG-SS09-MW03-02	SW8260	METHYLENE CHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	STYRENE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW03-02	SW8260	TETRACHLOROETHYLENE (PCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW03-02	SW8260	TOLUENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	TOTAL XYLENES	0.88	UG/L	0.3000	J
WG	WG-SS09-MW03-02	SW8260	trans-1,2-DICHLOROETHENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW03-02	SW8260	TRICHLOROETHYLENE (TCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW03-02	SW8260	TRICHLOROFLUOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW03-02	SW8260	VINYL CHLORIDE	0.00	UG/L	0.1000	U
WG	WG-SS09-MW04-02	SW8260	1,1,1,2-TETRACHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW04-02	SW8260	1,1,1-TRICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	1,1,2,2-TETRACHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	1,1,2-TRICHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	1,1-DICHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW04-02	SW8260	1,1-DICHLOROETHENE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	1,2-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	1,2-DICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	1,2-DICHLOROPROPANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	1,3-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	1,4-DICHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW04-02	SW8260	1-CHLOROHEXANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	BENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW04-02	SW8260	BROMOBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	BROMODICHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	BROMOFORM	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	BROMOMETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW04-02	SW8260	CARBON TETRACHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	CHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-MW04-02	SW8260	CHLOROETHANE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW04-02	SW8260	CHLOROFORM	0.00	UG/L	0.3000	U

TABLE C
Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-MW04-02	SW8260	CHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	cis-1,2-DICHLOROETHYLENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	DIBROMOCHLOROMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	DIBROMOMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	AK102	DIESEL RANGE ORGANICS	2.10	MG/L	0.0200	
WG	WG-SS09-MW04-02	SW8260	ETHYLBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	AK101	GASOLINE RANGE ORGANICS	3100.00	UG/L	70.0000	
WG	WG-SS09-MW04-02	SW8260	METHYLENE CHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	STYRENE	0.00	UG/L	0.5000	U
WG	WG-SS09-MW04-02	SW8260	TETRACHLOROETHYLENE (PCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW04-02	SW8260	TOLUENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	TOTAL XYLENES	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	trans-1,2-DICHLOROETHENE	0.00	UG/L	0.3000	U
WG	WG-SS09-MW04-02	SW8260	TRICHLOROETHYLENE (TCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-MW04-02	SW8260	TRICHLOROFLUOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-MW04-02	SW8260	VINYL CHLORIDE	0.00	UG/L	0.1000	U
WG	WG-SS09-WG01-02	SW8260	1,1,1,2-TETRACHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02	SW8260	1,1,1-TRICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	1,1,2,2-TETRACHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	1,1,2-TRICHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	1,1-DICHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02	SW8260	1,1-DICHLOROETHENE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	1,2-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	1,2-DICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	1,2-DICHLOROPROPANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	1,3-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	1,4-DICHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02	SW8260	1-CHLOROHEXANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	BENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02	SW8260	BROMOBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	BROMODICHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	BROMOFORM	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	BROMOMETHANE	0.00	UG/L	0.2000	U

TABLE C
Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-WG01-02	SW8260	CARBON TETRACHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	CHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02	SW8260	CHLOROETHANE	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02	SW8260	CHLOROFORM	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	CHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	cis-1,2-DICHLOROETHYLENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	DIBROMOCHLOROMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	DIBROMOMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	AK102	DIESEL RANGE ORGANICS	0.00	MG/L	0.0200	U
WG	WG-SS09-WG01-02	SW8260	ETHYLBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	AK101	GASOLINE RANGE ORGANICS	0.00	UG/L	70.0000	U
WG	WG-SS09-WG01-02	SW8260	METHYLENE CHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	STYRENE	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02	SW8260	TETRACHLOROETHYLENE (PCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02	SW8260	TOLUENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	TOTAL XYLENES	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	trans-1,2-DICHLOROETHENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02	SW8260	TRICHLOROETHYLENE (TCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02	SW8260	TRICHLOROFLUOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02	SW8260	VINYL CHLORIDE	0.00	UG/L	0.1000	U
WG	WG-SS09-WG01-02D	SW8260	1,1,1,2-TETRACHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02D	SW8260	1,1,1-TRICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	1,1,2,2-TETRACHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	1,1,2-TRICHLOROETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	1,1-DICHLOROETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02D	SW8260	1,1-DICHLOROETHENE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	1,2-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	1,2-DICHLOROETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	1,2-DICHLOROPROPANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	1,3-DICHLOROBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	1,4-DICHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02D	SW8260	1-CHLOROHEXANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	BENZENE	0.00	UG/L	0.2000	U

TABLE C
Laboratory Results
Source Area SS09
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier
WG	WG-SS09-WG01-02D	SW8260	BROMOBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	BROMODICHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	BROMOFORM	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	BROMOMETHANE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02D	SW8260	CARBON TETRACHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	CHLOROBENZENE	0.00	UG/L	0.2000	U
WG	WG-SS09-WG01-02D	SW8260	CHLOROETHANE	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02D	SW8260	CHLOROFORM	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	CHLOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	cis-1,2-DICHLOROETHYLENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	DIBROMOCHLOROMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	DIBROMOMETHANE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	AK102	DIESEL RANGE ORGANICS	0.00	MG/L	0.0200	U
WG	WG-SS09-WG01-02D	SW8260	ETHYLBENZENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	AK101	GASOLINE RANGE ORGANICS	0.00	UG/L	70.0000	U
WG	WG-SS09-WG01-02D	SW8260	METHYLENE CHLORIDE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	STYRENE	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02D	SW8260	TETRACHLOROETHYLENE (PCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02D	SW8260	TOLUENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	TOTAL XYLENES	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	trans-1,2-DICHLOROETHENE	0.00	UG/L	0.3000	U
WG	WG-SS09-WG01-02D	SW8260	TRICHLOROETHYLENE (TCE)	0.00	UG/L	0.5000	U
WG	WG-SS09-WG01-02D	SW8260	TRICHLOROFLUOROMETHANE	0.00	UG/L	0.4000	U
WG	WG-SS09-WG01-02D	SW8260	VINYL CHLORIDE	0.00	UG/L	0.1000	U

Notes:

J = estimated
 MG/L = milligrams per liter
 UG/L = micrograms per liter
 WG = groundwater

GROUNDWATER SAMPLING DATA SHEET

Site Name: <u>In-line Mountain LRRS</u> Site ID: <u>SS09</u> Project Number: <u>05G46200</u> Date: <u>8/14/95</u> Start Time: <u>1924</u> Finish Time: <u>2031</u> Sampled By: <u>R. H. S. Brown</u>	Well Number: <u>SS04-MW-01</u> Well Type: (i.e., Monitor, Extraction) <u>Monitor</u> Well Material: (i.e., PVC, St. Steel) <u>PVC</u> Well Integrity: <u>good</u> HNU Reading: <u>2-3 ppm</u>
--	---

WELL PURGING

PURGE VOLUME Borehole Radius (in feet) = $\frac{5}{12}$ inches/12 inches per foot = <u>0.417</u> Total depth of borehole (in feet BTOC) = <u>10.15</u> Water Level Depth (in feet BTOC) = <u>6.61</u> Casing Radius (in feet) = $\frac{1}{12}$ inches/12 inches per foot = <u>0.083</u> Total depth of casing (in feet BTOC) = <u>10.15</u> Number of well volumes to be purged (# Vols.) = <u>3</u> PURGE VOLUME CALCULATION Borehole Volume (gallons) = $3.14 \times (\text{Borehole radius (ft.)})^2 \times (\text{Total Depth of Borehole (ft.)} - \text{Water Level (ft.)}) \times 7.48 \times \text{# Vols.}$ $= 3.14 \times (0.417)^2 \times (10.15 - 6.61) \times 7.48 \times 3$ $= \underline{43.39} \text{ gallons}$ Casing Volume (gallons) = $3.14 \times (\text{Casing radius (ft.)})^2 \times (\text{Total Depth of Casing (ft.)} - \text{Water Level (ft.)}) \times 7.48 \times \text{# Vols.}$ $= 3.14 \times (0.083)^2 \times (10.15 - 6.61) \times 7.48 \times 3$ $= \underline{1.72} \text{ gallons}$ Total Purge Volume = $(\text{Borehole Volume (gal.)} - \text{Casing Volume (gal.)}) \times 0.45 + \text{Casing Volume (gal.)}$ $= (43.39 - 1.72) \times 0.45 + 1.72 = \underline{20.47} \text{ gallons}$	PURGE METHOD <input checked="" type="checkbox"/> Bailer - Type: <u>Teflon</u> Pump Type: <u>NA</u> Submersible <input type="checkbox"/> Centrifugal <input type="checkbox"/> Bladder <input type="checkbox"/> Other - Type: _____ Immiscible Phase Detection: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> LNAPL <input type="checkbox"/> DNAPL Depth to top (ft.) <u>NA</u> Depth to bottom (ft.) <u>NA</u> Thickness (ft.) <u>NA</u>
--	---

PURGE TIME <u>1926</u> Start <u>1942</u> Stop <u>16</u> Elapsed FIELD PARAMETER MEASUREMENT	PURGE RATE Initial <u>NA</u> gpm ACTUAL PURGE VOLUME <u>4</u> gallons
---	--

Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T °C / °F	Turbidity (ntu)	Other
No data collected due to oil sheen in well						

Meter IDs: Horiba Pump: _____ Others: _____

Observations During Purging (Well Conditions, Color, Odor): Oil sheen on water - Fuel odor

Discharge Water Disposal: Sanitary Sewer ☒ Storm Sewer ☐ Drum ☐ (No. _____) Other: _____
after treatment in water conditioning unit

WELL SAMPLING

SAMPLING METHOD <input checked="" type="checkbox"/> Submersible <input type="checkbox"/> Centrifugal <input type="checkbox"/> Bladder: Pump No. _____ Other - Type: _____	Teflon 2" <u>NA</u> <input checked="" type="checkbox"/> Bailer Other - Type: _____
--	---

SAMPLING DISTRIBUTION Sample Date: 8/14/95 Start Time: 2019 Finish Time: 2031
Water level at Sample time = 7.76

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab ID	Comments
WG-SS04-MW01-02	4-40 mL	8260, AK101	HCLF	IN-A102/01	for 8260
WG-SS04-MW01-02	D-11.4 mL	AK102	VWAS	IN-A102/02	for AK101/AK102
				65B	Sample SB

Duplicate Samples		Blank Samples		Other Samples	
Original Sample No.	Dup. Sample No.	Type	Sample No.	Type	Sample No.

Field QC By: S. Brown Date: 8/14/95

JACOBS ENGINEERING GROUP INC.

GROUNDWATER SAMPLING DATA SHEET

Site Name: SS09 Indian Mountain
 Site ID: SS09
 Project Number: 05G46200 HADSB
 Date: 8/14 Start Time: 1630 Finish Time: 1815
 Sampled By: R. Henry, S. Brown, S. Karim

Well Number: SS09-MW02
 Well Type: (i.e., Monitor, Extraction) Monitor
 Well Material: (i.e., PVC, St. Steel) PVC
 Well Integrity: good
 HNU Reading: background

WELL PURGING

PURGE VOLUME

Borehole Radius (in feet) = $\frac{5.12}{12}$ inches/12 inches per foot = 0.417
 Total depth of borehole (in feet BTOC) = 10.15
 Water Level Depth (in feet BTOC) = 5.45
 Casing Radius (in feet) = $\frac{1.2}{12}$ inches/12 inches per foot = 0.083
 Total depth of casing (in feet BTOC) = 10.15
 Number of well volumes to be purged (# Vols.) = 3

PURGE VOLUME CALCULATION

Borehole Volume (gallons) = $3.14 \times (\text{Borehole radius (ft.)})^2 \times (\text{Total Depth of Borehole (ft.)} - \text{Water Level (ft.)}) \times 7.48 \times \text{\# Vols.}$
 $= 3.14 \times (0.417)^2 \times (10.15 - 5.45) \times 7.48 \times 3$
 $= 57.62$ gallons

Casing Volume (gallons) = $3.14 \times (\text{Casing radius (ft.)})^2 \times (\text{Total Depth of Casing (ft.)} - \text{Water Level (ft.)}) \times 7.48 \times \text{\# Vols.}$
 $= 3.14 \times (0.083)^2 \times (10.15 - 5.45) \times 7.48 \times 3$
 $= 2.3$ gallons

Total Purge Volume = $(\text{Borehole Volume (gal.)} - \text{Casing Volume (gal.)}) \times 0.45 + \text{Casing Volume (gal.)} = \text{Tot. Purge Volume}$
 $= (57.62 - 2.3) \times 0.45 + 2.3 = 27.15$ gallons

PURGE TIME

1630 Start Stop Elapsed

PURGE RATE

Initial NA gpm

ACTUAL PURGE VOLUME

6 HADSB gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T $\frac{Y}{F}$ °C	Turbidity (ntu)	Other DO $\frac{DO}{Sc}$	Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T $\frac{Y}{F}$ °C	Turbidity (ntu)	Other
T=1641	2.5	5.76	0.345	5.5	161	15.6 0.01							
T=1653	3.5	5.83	0.371	5.3	53	15.6 0.01							
<u>purged dry</u>													

Meter IDs Horiba: 11020 Pump: NA Others:

Observations During Purging (Well Conditions, Color, Odor): No odor

Discharge Water Disposal: Sanitary Sewer X Storm Sewer Drum (No.) Other: after running through the water conditioning unit

WELL SAMPLING

SAMPLING METHOD

Teflon
 Submersible Centrifugal Bladder: Pump No.

SAMPLING DISTRIBUTION Sample Date: 08/14/95 Start Time: 1803 Finish Time: 1810

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab ID	Comments
WG-SS09-MW-02-4-40 mL		260, AK101	HCL for	IN-A102801	
022-11.4 mL		AK102	40 mL	IN-A102802	
				IN-A102701	for 8260
				IN-A102702	for AK101/AK102

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Dup. Sample No.

Blank Samples

Type	Sample No.

Other Samples

Type	Sample No.

Field QC By: S. Brown Date: 8/14/95

JACOBS ENGINEERING GROUP INC.

GROUNDWATER SAMPLING DATA SHEET

Site Name: Indian Mountain
 Site ID: 5609
 Project Number: 05446200
 Date: 8/13/95 Start Time: 1520 Finish Time: 1823
 Sampled By: R. Henry, S. Brown, S. Karmi

Well Number: 5609-MW03
 Well Type: (i.e., Monitor, Extraction) Monitor
 Well Material: (i.e., PVC, St. Steel) PVC
 Well Integrity: locked - OK
 HNU Reading: _____

WELL PURGING

PURGE VOLUME

Borehole Radius (in feet) = 5/12 inches/12 inches per foot = .417
 Total depth of borehole (in feet BTOC) = 10.10
 Water Level Depth (in feet BTOC) = 7.44
 Casing Radius (in feet) = 1/2 inches/12 inches per foot = .083
 Total depth of casing (in feet BTOC) = 10.10
 Number of well volumes to be purged (# Vols.) = _____

PURGE VOLUME CALCULATION

Borehole Volume (gallons) = $3.14 \times (.417)^2 \times (10.10 - 7.44) \times 7.48 \times 3$
 Borehole radius (ft.) Total Depth of Borehole (ft.) Water Level (ft.) gallons/ft.³ # Vols.
 = _____ gallons
 Casing Volume (gallons) = $3.14 \times (.083)^2 \times (10.10 - 7.44) \times 7.48 \times 3$
 Casing radius (ft.) Total Depth of Casing (ft.) Water Level (ft.) gallons/ft.³ # Vols.
 = _____ gallons
 Total Purge Volume = (10.86 - _____) X 0.45 + _____ = _____ gallons
 Borehole Volume (gal.) Casing Volume (gal.) Casing Volume (gal.) Tot. Purge Volume

PURGE TIME

1520 Start 1553 Stop 33 Elapsed _____

PURGE RATE

Initial _____ gpm

ACTUAL PURGE VOLUME

15 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T <input checked="" type="checkbox"/> °C _____ °F	Turbidity (ntu)	Other	Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T <input checked="" type="checkbox"/> °C _____ °F	Turbidity (ntu)	Other
<u>1520</u>	<u>Started purging</u>						<u>1553</u>	<u>7</u>	<u>6.6</u>	<u>0.185</u>	<u>5.5</u>	<u>560</u>	<u>0.070</u>
<u>1528</u>	<u>2</u>	<u>5.58</u>	<u>0.350</u>	<u>5.7</u>	<u>481</u>	<u>15.18 DO</u>	<u>Stopped purging - considered dry</u>						
<u>1547</u>	<u>6</u>	<u>5.63</u>	<u>0.290</u>	<u>5.7</u>	<u>7</u>	<u>0.012 DO</u>	<u>1819</u>	<u>NA</u>	<u>5.95</u>	<u>0.117</u>	<u>6.0</u>	<u>300</u>	<u>15.610</u>

Meter IDs Horiba: 405069 Pump: _____

Others: _____

Sampling _____

Not stable c.c.c.s

Observations During Purging (Well Conditions, Color, Odor): _____

Discharge Water Disposal: Sanitary Sewer ☒ Storm Sewer _____ Drum (No. _____) Other: _____
after running through water conditioning unit

WELL SAMPLING

SAMPLING METHOD

Submersible _____ Centrifugal _____ Bladder: Pump No. _____ Other - Type: _____

SAMPLING DISTRIBUTION Sample Date: 08/14/95 Start Time: 1815 Finish Time: 1823

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab ID	Comments
<u>WG-5509-MW03-02</u>	<u>4.40 mL</u>	<u>8260, AK101,</u>	<u>HCl for</u>	<u>A102A01</u>	<u>for 8260</u>
	<u>2 - 1 L amber</u>	<u>AK102</u>	<u>40 mL</u>	<u>A02802</u>	<u>for AK101/A12102</u>

QUALITY CONTROL SAMPLES

Duplicate Samples		Blank Samples		Other Samples	
Original Sample No.	Dup. Sample No.	Type	Sample No.	Type	Sample No.

Field QC By: S. Brown

Date: 8/13/95

JACOBS ENGINEERING GROUP INC.

GROUNDWATER SAMPLING DATA SHEET

Site Name: Indian Mountain LRPS
 Site ID: SS09
 Project Number: 05446200
 Date: 8/14/95 Start Time: 1609 Finish Time: 1835
 Sampled By: S. Brown, R. Hing

Well Number: MW04 (SS09)
 Well Type: (i.e., Monitor, Extraction) Monitor
 Well Material: (i.e., PVC, St. Steel) PVC
 Well Integrity: good
 HNU Reading: 1-2 pm

WELL PURGING

PURGE VOLUME 5 to 10 inches
 Borehole Radius (in feet) = 0.83 inches/12 inches per foot = 0.069
 Total depth of borehole (in feet BTOC) = 9.80
 Water Level Depth (in feet BTOC) = 6.87
 Casing Radius (in feet) = 2 inches/12 inches per foot = 0.167
 Total depth of casing (in feet BTOC) = 9.80
 Number of well volumes to be purged (# Vols.) = 3

PURGE METHOD

☒ Bailor - Type: T & Flw 2"
 Pump Type:
☐ Submersible ☐ Centrifugal ☐ Bladder
☐ Other - Type: _____
 Immiscible Phase Detection: Yes ☒ No ☐ LNAPL ☐ DNAPL
 Depth to top (ft.) NA Depth to bottom (ft.) NA
 Thickness (ft.) NA

PURGE VOLUME CALCULATION

Borehole Volume (gallons) = $3.14 \times (0.069)^2 \times (9.80 - 6.87) \times 7.48 \times 3$
 $= 142.25$ gallons
 Casing Volume (gallons) = $3.14 \times (0.167)^2 \times (9.80 - 6.87) \times 7.48 \times 3$
 $= 5.80$ gallons
 Total Purge Volume = $(142.25 - 5.80) \times 0.45 + 5.80 = 67.2$ gallons

PURGE TIME

1609 Start 1630 Stop 21 Elapsed

PURGE RATE

Initial NA gpm

ACTUAL PURGE VOLUME

15-2 gallons

FIELD PARAMETER MEASUREMENT

Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T °C	Turbidity (ntu)	Other	Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T °C	Turbidity (ntu)	Other
<u>1613</u>	<u>0.5</u>	<u>5.72</u>	<u>0.232</u>	<u>6.4</u>	<u>49</u>	<u>AK10</u>							
<u>1634</u>	<u>1.0</u>	<u>5.58</u>	<u>0.178</u>	<u>6.4</u>	<u>200</u>	<u>NA</u>							

Meter IDs Horiba: 405009 Pump: _____ Others: _____

Observations During Purging (Well Conditions, Color, Odor): Fuel odor

Discharge Water Disposal: Sanitary Sewer ☒ Storm Sewer ☐ Drum (No. _____) Other: _____
after running through the water conditioning unit

WELL SAMPLING

SAMPLING METHOD

☒ Submersible ☐ Centrifugal ☐ Bladder: Pump No. _____ Other - Type: _____

SAMPLING DISTRIBUTION Sample Date: 8/13/95 Start Time: 1827 Finish Time: 1835

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab ID	Comments
<u>WG-SS09-MW04</u>	<u>4-40 mL</u>	<u>8260 AK101</u>	<u>HCL F-R</u>	<u>IN-A102901</u>	<u>Shewan</u>
<u>02</u>	<u>2-11.7 mL</u>	<u>AK102</u>	<u>40 mL</u>	<u>IN-A102902</u>	<u>for AK101/AK102</u>

QUALITY CONTROL SAMPLES

Duplicate Samples		Blank Samples		Other Samples	
Original Sample No.	Dup. Sample No.	Type	Sample No.	Type	Sample No.

Field QC By: S. Brown Date: 8/14/95

JACOBS ENGINEERING GROUP INC.

Chain of Custody: IN-A102901

GROUNDWATER SAMPLING DATA SHEET

Site Name: <u>Indian Mountain LARS</u>	Well Number: <u>WG-SS09 WG01</u>
Site ID: <u>SS01</u>	Well Type: (i.e., Monitor, Extraction) <u>Water Supply</u>
Project Number: <u>05646200</u>	Well Material: (i.e., PVC, St. Steel) <u>Steel Culvert</u>
Date: <u>8/14/95</u> Start Time: <u>1952</u> Finish Time: <u>2015</u>	Well Integrity: _____
Sampled By: <u>R. Hing, S. Kerni</u>	HNU Reading: <u>None</u>

WELL PURGING

PURGE VOLUME Borehole Radius (in feet) = _____ inches/12 inches per foot = _____ Total depth of borehole (in feet BTOC) = _____ Water Level Depth (in feet BTOC) = <u>8.27</u> Casing Radius (in feet) = _____ inches/12 inches per foot = _____ Total depth of casing (in feet BTOC) = _____ Number of well volumes to be purged (# Vols.) = _____ PURGE VOLUME CALCULATION Borehole Volume (gallons) = $3.14 \times (\text{Borehole radius (ft)})^2 \times (\text{Total Depth of Borehole (ft)} - \text{Water Level (ft)}) \times 7.48$ X _____ = _____ gallons Casing Volume (gallons) = $3.14 \times (\text{Casing radius (ft)})^2 \times (\text{Total Depth of Casing (ft)} - \text{Water Level (ft)}) \times 7.48$ X _____ = _____ gallons Total Purge Volume = (Borehole Volume (gal.) - Casing Volume (gal.)) X 0.45 + Casing Volume (gal.) = _____ gallons	PURGE METHOD Bailer - Type: _____ Pump Type: _____ Submersible _____ Centrifugal _____ Bladder _____ Other - Type: _____ Immiscible Phase Detection: Yes _____ No _____ LNAPL _____ DNAPL _____ Depth to top (ft.) _____ Depth to bottom (ft.) _____ Thickness (ft.) _____
---	--

PURGE TIME Start _____ Stop _____ Elapsed _____

PURGE RATE Initial _____ gpm

ACTUAL PURGE VOLUME _____ gallons

FIELD PARAMETER MEASUREMENT													
Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T <u>Y</u> °C / _____ °F	Turbidity (ntu)	Other	Minutes Since Pumping Began	Volume Purged	pH	Cond. (umhos/cm)	T _____ °C / _____ °F	Turbidity (ntu)	Other
<u>None</u>		<u>6.5</u>	<u>0.038</u>	<u>9.9</u>	<u>10</u>	<u>Do Sc1</u>							

Meter IDs Horiba: _____ Pump: _____ Others: _____

Observations During Purging (Well Conditions, Color, Odor): No pumping - Water Supply Well

Discharge Water Disposal: Sanitary Sewer _____ Storm Sewer _____ Drum _____ (No. _____) Other: _____

WELL SAMPLING

SAMPLING METHOD Teflon
 Submersible _____ Centrifugal _____ Bladder: Pump No. _____ Other - Type: _____

SAMPLING DISTRIBUTION Sample Date: 8/14/95 Start Time: 1958 Finish Time: 2013

Sample No.	Volume/Cont.	Analysis Requested	Preservatives	Lab ID	Comments
<u>WG SS09 WG0102</u>	<u>4-40 mL Vol</u>	<u>8260, AK101, AK102</u>	<u>HCLF-Vol</u>	<u>IN-A103001</u>	<u>for 8260</u>
	<u>2-1 HAc-Amb</u>			<u>IN-A103002</u>	<u>for AK101/AK102</u>
<u>WG SS09 WG0102</u>	<u>" "</u>	<u>" "</u>	<u>" "</u>		

QUALITY CONTROL SAMPLES

Duplicate Samples		Blank Samples		Other Samples	
Original Sample No.	Dup. Sample No.	Type	Sample No.	Type	Sample No.
<u>WG SS09 WG0102</u>	<u>WG SS09 WG0102</u>				

IN-A104201 for 8260 IN-A104202 for AK101/AK102

Field QC By: J. Hing Date: 8/15/95

JACOBS ENGINEERING GROUP INC.

INDIAN MOUNTAIN LRRS
PROJECT NUMBER 05G46200
WATER LEVEL ELEVATIONS

[illegible]

Note: MW03 - 8 ppm in casing: 1-2 ppm in Breathing zone.
- no silication observed within sounding

25-Jul-95 date

According to station personnel, it rained heavily over the weekend of 8/5 & 8/6

APPENDIX D
SS10 LABORATORY RESULTS
SS10 SAMPLING FORMS

TABLE D
Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW10	SW8270	1,2,4-TRICHLOROBENZENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	1,2-DICHLOROBENZENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	1,3-DICHLOROBENZENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	1,4-DICHLOROBENZENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2,4,5-TRICHLOROPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2,4,6-TRICHLOROPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2,4-DICHLOROPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2,4-DIMETHYLPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2,4-DINITROPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2,4-DINITROTOLUENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2,6-DINITROTOLUENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2-CHLORONAPHTHALENE	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	2-CHLOROPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2-METHYLNAPHTHALENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2-NITROANILINE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	2-NITROPHENOL	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	3,3'-DICHLOROBENZIDINE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	3-NITROANILINE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	4-CHLOROANILINE	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	UG/L	40.0000	U		
WS	WS-SS10-SW10	SW8270	4-NITROANILINE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	4-NITROPHENOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	ACENAPHTHENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	ACENAPHTHYLENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	ANTHRACENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	BENZO(a)ANTHRACENE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	BENZO(a)PYRENE	0.00	UG/L	10.0000	U		

TABLE D
Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW10	SW8270	BENZO(b)FLUORANTHENE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	BENZO(g,h,i)PERYLENE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	BENZO(k)FLUORANTHENE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	BENZOIC ACID	0.00	UG/L	200.0000	U		
WS	WS-SS10-SW10	SW8270	BENZYL ALCOHOL	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	BENZYL BUTYL PHTHALATE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	CHRYSENE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	DI-n-BUTYL PHTHALATE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	DI-n-OCTYL PHTHALATE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	DIBENZOFURAN	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	DIETHYL PHTHALATE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	DIMETHYL PHTHALATE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	FLUORANTHENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	FLUORENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	HEXACHLOROBENZENE	0.00	UG/L	10.0000	U		
WS	WS-SS10-SW10	SW8270	HEXACHLOROBUTADIENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	HEXACHLOROETHANE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	INDENO(1,2,3-c,d) PYRENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	ISOPHORONE	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	N-NITROSODIPHENYLAMINE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	NAPHTHALENE	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	NITROBENZENE	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW10	SW8270	PENTACHLOROPHENOL	460.00	UG/L	20.0000		MC CR ZZ	WA WC YY
WS	WS-SS10-SW10	SW8270	PHENANTHRENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW10	SW8270	PHENOL	0.00	UG/L	20.0000	U		

TABLE D
Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW10	SW8270	PYRENE	0.00	UG/L	20.0000	U		
WS	WS-SS10-SW11	SW8270	1,2,4-TRICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	1,2-DICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	1,3-DICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	1,4-DICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2,4,5-TRICHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2,4,6-TRICHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2,4-DICHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2,4-DIMETHYLPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2,4-DINITROPHENOL	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	2,4-DINITROTOLUENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	2,6-DINITROTOLUENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2-CHLORONAPHTHALENE	0.00	UG/L	6.0000	U		
WS	WS-SS10-SW11	SW8270	2-CHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2-METHYLNAPHTHALENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2-NITROANILINE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	2-NITROPHENOL	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	3,3'-DICHLOROBENZIDINE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	3-NITROANILINE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	4-CHLOROANILINE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	UG/L	7.0000	U		
WS	WS-SS10-SW11	SW8270	4-NITROANILINE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	4-NITROPHENOL	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	ACENAPHTHENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	ACENAPHTHYLENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	ANTHRACENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	BENZO(a)ANTHRACENE	0.00	UG/L	2.0000	U		

TABLE D
Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW11	SW8270	BENZO(a)PYRENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	BENZO(b)FLUORANTHENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	BENZO(g,h,i)PERYLENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	BENZO(k)FLUORANTHENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	BENZOIC ACID	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW11	SW8270	BENZYL ALCOHOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	BENZYL BUTYL PHTHALATE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	CHRYSENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	DI-n-BUTYL PHTHALATE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	DI-n-OCTYL PHTHALATE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	DIBENZ(a,h) ANTHRACENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	DIBENZOFURAN	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	DIETHYL PHTHALATE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	DIMETHYL PHTHALATE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	FLUORANTHENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	FLUORENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	HEXACHLOROBENZENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW11	SW8270	HEXACHLOROBUTADIENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	HEXACHLOROETHANE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	INDENO(1,2,3-c,d)PYRENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW11	SW8270	ISOPHORONE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	N-NITROSODIPHENYLAMINE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	NAPHTHALENE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	NITROBENZENE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW11	SW8270	PENTACHLOROPHENOL	42.00	UG/L	3.0000	J	MC CR ZZ	WA WC YY
WS	WS-SS10-SW11	SW8270	PHENANTHRENE	0.00	UG/L	3.0000	U		

TABLE D
Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW11	SW8270	PHENOL	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW11	SW8270	PYRENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	1,2,4-TRICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	1,2-DICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	1,3-DICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	1,4-DICHLOROBENZENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2,4,5-TRICHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2,4,6-TRICHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2,4-DICHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2,4-DIMETHYLPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2,4-DINITROPHENOL	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	2,4-DINITROTOLUENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	2,6-DINITROTOLUENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2-CHLORONAPHTHALENE	0.00	UG/L	6.0000	U		
WS	WS-SS10-SW12	SW8270	2-CHLOROPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2-METHYLNAPHTHALENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2-NITROANILINE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	2-NITROPHENOL	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	3,3'-DICHLOROBENZIDINE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	3-NITROANILINE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	4-CHLOROANILINE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	UG/L	7.0000	U		
WS	WS-SS10-SW12	SW8270	4-NITROANILINE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	4-NITROPHENOL	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	ACENAPHTHENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	ACENAPHTHYLENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	ANTHRACENE	0.00	UG/L	3.0000	U		

TABLE D
Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW12	SW8270	BENZO(a)ANTHRACENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	BENZO(a)PYRENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	BENZO(b)FLUORANTHENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	BENZO(g,h,i)PERYLENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	BENZO(k)FLUORANTHENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	BENZOIC ACID	0.00	UG/L	30.0000	U		
WS	WS-SS10-SW12	SW8270	BENZYL ALCOHOL	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	BENZYL BUTYL PHTHALATE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	CHRYSENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	DI-n-BUTYL PHTHALATE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	DI-n-OCTYL PHTHALATE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	DIBENZOFURAN	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	DIETHYL PHTHALATE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	DIMETHYL PHTHALATE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	FLUORANTHENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	FLUORENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	HEXACHLOROBENZENE	0.00	UG/L	2.0000	U		
WS	WS-SS10-SW12	SW8270	HEXACHLOROBUTADIENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	HEXACHLOROETHANE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	INDENO(1,2,3-c,d) PYRENE	0.00	UG/L	4.0000	U		
WS	WS-SS10-SW12	SW8270	ISOPHORONE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	N-NITROSODIPHENYLAMINE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	NAPHTHALENE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	NITROBENZENE	0.00	UG/L	5.0000	U		
WS	WS-SS10-SW12	SW8270	PENTACHLOROPHENOL	0.00	UG/L	3.0000	U		

TABLE D
Laboratory Results
Source Area SS10
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Human Health Risk	Ecological Risk
WS	WS-SS10-SW12	SW8270	PHENANTHRENE	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	PHENOL	0.00	UG/L	3.0000	U		
WS	WS-SS10-SW12	SW8270	PYRENE	0.00	UG/L	3.0000	U		

Notes:

ARAR = applicable or relevant and appropriate requirements
COPC = Contaminant of Potential Concern
COPEC = Contaminant of Potential Ecological Concern
CR = exceeds residential carcinogenic 10^{-6} water only - human health Preliminary Remediation Goal
MC = exceeds maximum contaminant level
U = undetected (analyzed for but undetected)
UG/L = micrograms per liter
WA = AWQC (federal ambient water quality criteria) acute - ecological/ARAR
WC = AWQC (federal ambient water quality criteria) chronic - ecological/ARAR
WS = surface water
YY = retained as an ecological COPEC
ZZ = retained as a human health COPC

SURFACE WATER/SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: SS10

Loc ID SS10-SD04

SAMPLE ID: WS-SS10-SW10

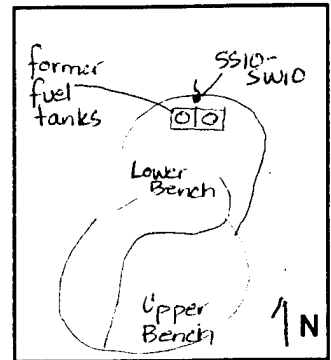
LOT CONTROL NO. IN-A1011

DATE: 08/13/95

TIME: 1329

WEATHER: 50°F, overcast, breezy

FIELD SAMPLING TEAM: _____



SITE ID: LOC ID: SAMPLE NUMBER:

COLLECTION DATE: COLLECTION TIME: LOT CONTROL NO:

SAMPLERS: R. Henry, S. Karmi

MATRIX: SURFACE WATER X SEDIMENT

SAMPLING TECHNIQUE: immersion of bottle

SAMPLED FROM: SHORE: X WADED: OTHER:

SAMPLING LOCATION: STREAM: LAKE/POND: TIDAL POOL:

SEEP: X CREEK: OTHER:

FLOW RATE (if applicable): gpm MEASURED: ESTIMATED:

FIELD ANALYTICAL PARAMETERS:

Sample No. & QC Type	Redox Pot. (mV)	Water Temp (°F/°C)	Dissolved Oxygen (mg/L)	pH S.U.	Salinity (%)	Specific Conduct. (mS/cm)	Turbidity (NTU)
Not collected							

SEDIMENT DESCRIPTION _____

QC TYPE: REAL: MS: X MSD: X LR: DUP: RNS:

COC # A1011 Requested analyses: 8270

COMMENTS: Lab analysis for 8270 or PCP only. Same location as 1999 sample SS10-SW04

Field QC By: Sarah Brown Sarah Brown
Print Name Signature

Date: 8/13/95

Site Supervisor QC By: _____
Print Name Signature

Date: _____

SURFACE WATER/SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

Loc ID SS10-SD07

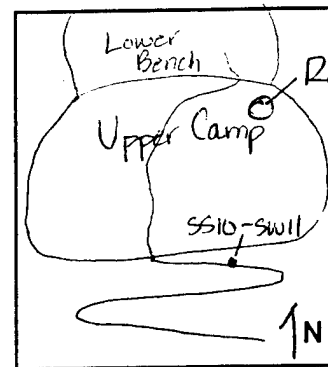
SITE ID: SS10

SAMPLE ID: WS-SS10-SW11 LOT CONTROL NO. IN-A1013

DATE: 08/13/95 TIME: 1400

WEATHER: 50°F, windy, cloudy

FIELD SAMPLING TEAM: R. Henry, S. Karmi



SITE ID: _____ LOC ID: _____ SAMPLE NUMBER: _____

COLLECTION DATE: _____ COLLECTION TIME: _____ LOT CONTROL NO: _____

SAMPLERS: _____

MATRIX: SURFACE WATER ☒ SEDIMENT _____

SAMPLING TECHNIQUE: immersion

SAMPLED FROM: SHORE: ☒ WADED: _____ OTHER: _____

SAMPLING LOCATION: STREAM: _____ LAKE/POND: _____ TIDAL POOL: _____

SEEP: ☒ CREEK: _____ OTHER: _____

FLOW RATE (if applicable): _____ gpm MEASURED: _____ ESTIMATED: _____

FIELD ANALYTICAL PARAMETERS:

Sample No. & QC Type	Redox Pot. (mV)	Water Temp (°F/°C)	Dissolved Oxygen (mg/L)	pH S.U.	Salinity (%)	Specific Conduct. (mS/cm)	Turbidity (NTU)
<u>Not measured</u>							

SEDIMENT DESCRIPTION _____

QC TYPE: REAL: _____ MS: _____ MSD: _____ LR: _____ DUP: _____ RNS: _____

COC # IN-A1013 Requested analyses: 0.270/PCP

COMMENTS: Same location as 1994 samples SE-SS10-SD07 and WS-SS10-SW07

Field QC By: Sarah Brown Sarah Brown
Print Name Signature

Date: 8/13/95

Site Supervisor QC By: _____
Print Name Signature

Date: _____

SURFACE WATER/SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: SS10

LOC ID SS10-SW12

SAMPLE ID: WS-SS10-SW12

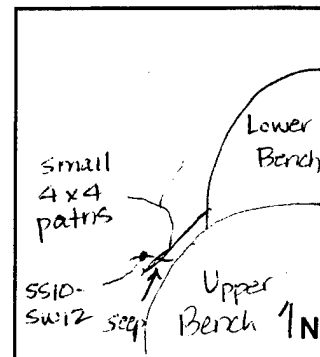
LOT CONTROL NO. IN-A1012

DATE: 08/13/95

TIME: 1344

WEATHER: Cloudy, 50°F, windy

FIELD SAMPLING TEAM: R. Henry, G. Karni



SITE ID: LOC ID: SAMPLE NUMBER:

COLLECTION DATE: COLLECTION TIME: LOT CONTROL NO:

SAMPLERS:

MATRIX: SURFACE WATER X SEDIMENT

SAMPLING TECHNIQUE: immersion

SAMPLED FROM: SHORE: X WADED: OTHER:

SAMPLING LOCATION: STREAM: LAKE/POND: TIDAL POOL:

SEEP: X CREEK: OTHER:

FLOW RATE (if applicable): gpm MEASURED: ESTIMATED:

FIELD ANALYTICAL PARAMETERS:

Sample No. & QC Type	Redox Pot. (mV)	Water Temp (°F/°C)	Dissolved Oxygen (mg/L)	pH S.U.	Salinity (%)	Specific Conduct. (mS/cm)	Turbidity (NTU)
Not measured							

SEDIMENT DESCRIPTION

QC TYPE: REAL: MS: MSD: LR: DUP: RNS:

COC # IN-A1012 Requested analyses: 8270 / PCP

COMMENTS: Same location as SD01-SD09/SW09 from 1994

Field QC By: Sarah Brown Sarah Brown Date: 8/13/95
Print Name Signature

Site Supervisor QC By: Date:
Print Name Signature

SURFACE WATER/SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

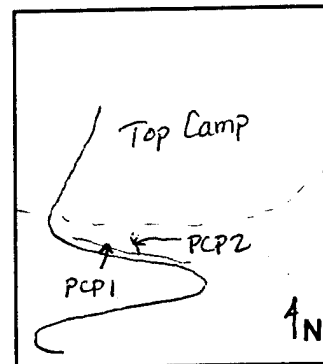
SITE ID: SS10

SAMPLE ID: PCP1 & PCP2 LOT CONTROL NO. test kit

DATE: 8/9/95 TIME: 1345

WEATHER: overcast, rainy, 50°F

FIELD SAMPLING TEAM: S. Brown, S. Karmi, P. Striebiel



SITE ID: _____ LOC ID: _____ SAMPLE NUMBER: _____

COLLECTION DATE: _____ COLLECTION TIME: _____ LOT CONTROL NO: _____

SAMPLERS: _____

MATRIX: SURFACE WATER ☒ SEDIMENT _____

SAMPLING TECHNIQUE: sum^{SB} Submersion

SAMPLED FROM: SHORE: ☒ WADED: _____ OTHER: _____

SAMPLING LOCATION: STREAM: ☒ LAKE/POND: _____ TIDAL POOL: _____

SEEP: ☒ PCP2 CREEK: _____ OTHER: _____

FLOW RATE (if applicable): _____ gpm MEASURED: _____ ESTIMATED: _____

FIELD ANALYTICAL PARAMETERS:

Sample No. & QC Type	Redox Pot. (mV)	Water Temp (°F/°C)	Dissolved Oxygen (mg/L)	pH S.U.	Salinity (%)	Specific Conduct. (mS/cm)	Turbidity (NTU)
Not Measured							

SEDIMENT DESCRIPTION: _____

QC TYPE: REAL: _____ MS: _____ MSD: _____ LR: _____ DUP: _____ RNS: _____

COC # _____ Requested analyses: _____

COMMENTS:

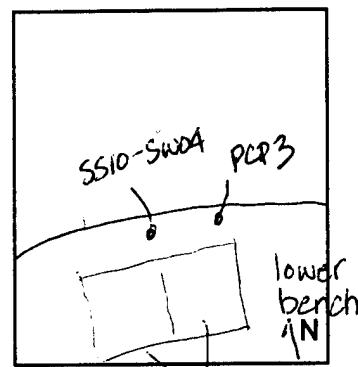
test kit analyses for PCP completed. Locations are nearby the SD01-SW07 location from 1994 Results: PCP1 → ND, PCP2 → ND

Field QC By: Sarah Brown Sarah Brown Date: 8/9/95
Print Name Signature

Site Supervisor QC By: _____ Date: _____
Print Name Signature

SURFACE WATER/SEDIMENT SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS
 PROJECT NUMBER: 05G46200
 SITE ID: SS10
 SAMPLE ID: PCP3 & SS10-SW04 LOT CONTROL NO. test kit
 DATE: 8/9/95 TIME: 1355
 WEATHER: raining 50° F, light breeze
 FIELD SAMPLING TEAM: S. Brown, P. Striebick, S. Karmi



SITE ID: _____ LOC ID: _____ SAMPLE NUMBER: _____
 COLLECTION DATE: _____ COLLECTION TIME: _____ LOT CONTROL NO: _____

SAMPLERS: _____

MATRIX: SURFACE WATER ☒ SEDIMENT _____

SAMPLING TECHNIQUE: immersion of sample container

SAMPLED FROM: SHORE: ☒ WADED: _____ OTHER: _____

SAMPLING LOCATION: STREAM: ☒ LAKE/POND: _____ TIDAL POOL: _____

SEEP: _____ CREEK: _____ OTHER: _____

FLOW RATE (if applicable): _____ gpm MEASURED: _____ ESTIMATED: _____

FIELD ANALYTICAL PARAMETERS:

Sample No. & QC Type	Redox Pot. (mV)	Water Temp (°F/°C)	Dissolved Oxygen (mg/L)	pH S.U.	Salinity (%)	Specific Conduct. (mS/cm)	Turbidity (NTU)
Not measured							

SEDIMENT DESCRIPTION

QC TYPE: REAL: _____ MS: _____ MSD: _____ LR: _____ DUP: _____ RNS: _____

COC # _____ Requested analyses: _____

COMMENTS: Test kit samples for PCP analysis. Both locations are just due north of former tank area. PCP3 may be stream/seep that leads to SD01-SW03. Results: PCP3 borderline at 10ppm, SW04 - ND

Field QC By: Sarah Brown Sarah Brown Date: 8/9/95
Print Name Signature

Site Supervisor QC By: _____ Date: _____
Print Name Signature

APPENDIX E
SS11 LABORATORY RESULTS
SS11 SAMPLING FORMS

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS01	SW8240	1,1,1-TRICHLOROETHANE	0.00	MG/KG	0.0006	U	
SS	SO-SS11-SS01	SW8240	1,1,2,2-TETRACHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS11-SS01	SW8240	1,1,2-TRICHLOROETHANE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS01	SW8240	1,1-DICHLOROETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS11-SS01	SW8240	1,1-DICHLOROETHENE	0.00	MG/KG	0.0006	U	
SS	SO-SS11-SS01	SW8270	1,2,4-TRICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	1,2-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8240	1,2-DICHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS11-SS01	SW8240	1,2-DICHLOROPROPANE	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS01	SW8270	1,3-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	1,4-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2,4,5-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2,4,6-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2,4-DICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2,4-DIMETHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2,4-DINITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	2,4-DINITROTOLUENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	2,6-DINITROTOLUENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8240	2-CHLOROETHYL VINYL ETHER	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS01	SW8270	2-CHLORONAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2-CHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8240	2-HEXANONE	0.00	MG/KG	0.0030	U	
SS	SO-SS11-SS01	SW8270	2-METHYLNAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	2-NITROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	3,3-DICHLOROBENZIDINE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	3-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	4-CHLOROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS01	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	MG/KG	0.3000	U	
SS	SO-SS11-SS01	SW8270	4-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	4-NITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	ACENAPHTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	ACENAPHTHYLENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8240	ACETONE	0.00	MG/KG	0.0080	U	
SS	SO-SS11-SS01	SW8270	ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8240	BENZENE	0.00	MG/KG	0.0006	U	
SS	SO-SS11-SS01	SW8270	BENZO(a)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	BENZO(a)PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	BENZO(b)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	BENZO(g,h,i)PERYLENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	BENZO(k)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	BENZOIC ACID	0.00	MG/KG	1.0000	U	
SS	SO-SS11-SS01	SW8270	BENZYL ALCOHOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	BENZYL BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	MG/KG	0.2000	U	YY
SS	SO-SS11-SS01	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.50	MG/KG	0.1000	J	
SS	SO-SS11-SS01	SW8240	BROMODICHLOROMETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS11-SS01	SW8240	BROMOFORM	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS01	SW8240	BROMOMETHANE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS01	SW8240	CARBON DISULFIDE	0.00	MG/KG	0.0020	U	
SS	SO-SS11-SS01	SW8240	CARBON TETRACHLORIDE	0.00	MG/KG	0.0009	U	
SS	SO-SS11-SS01	SW8240	CHLOROBENZENE	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS01	SW8240	CHLOROETHANE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS01	SW8240	CHLOROFORM	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS01	SW8240	CHLOROMETHANE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS01	SW8270	CHRYSENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8240	cis-1,2-DICHLOROETHYLENE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS01	SW8240	cis-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0008	U	
SS	SO-SS11-SS01	SW8270	DI-n-BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS01	SW8270	DI-n-OCTYLPHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	DIBENZOFURAN	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8240	DIBROMOCHLOROMETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS11-SS01	AK102	DIESEL RANGE ORGANICS	0.00	MG/KG	0.9000	U	
SS	SO-SS11-SS01	SW8270	DIETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	DIMETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8240	ETHYLBENZENE	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS01	SW8270	FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	FLUORENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	AK101	GASOLINE RANGE ORGANICS	0.00	MG/KG	0.0800	U	
SS	SO-SS11-SS01	SW8270	HEXACHLOROBENZENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	HEXACHLOROBUTADIENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	HEXACHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	INDENO(1,2,3-c,d) PYRENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	ISOPHORONE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8240	METHYL ETHYL KETONE (2-BUTANONE)	0.00	MG/KG	0.0050	U	
SS	SO-SS11-SS01	SW8240	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	0.00	MG/KG	0.0020	U	
SS	SO-SS11-SS01	SW8240	METHYLENE CHLORIDE	0.00	MG/KG	0.0008	U	
SS	SO-SS11-SS01	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	N-NITROSODIPHENYLAMINE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	NAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	NITROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS01	SW8270	PENTACHLOROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	PHENANTHRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	PHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8270	PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS01	SW8240	STYRENE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS01	SW8240	TETRACHLOROETHYLENE (PCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS01	SW8240	TOLUENE	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS01	SW8240	TOTAL XYLENES	0.00	MG/KG	0.0030	U	
SS	SO-SS11-SS01	SW8240	trans-1,2-DICHLOROETHENE	0.00	MG/KG	0.0004	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS01	SW8240	trans-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS01	SW8240	TRICHLOROETHYLENE (TCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS01	SW8240	VINYL ACETATE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS01	SW8240	VINYL CHLORIDE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS02	SW8240	1,1,1-TRICHLOROETHANE	0.00	MG/KG	0.0007	U	
SS	SO-SS11-SS02	SW8240	1,1,2,2-TETRACHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS11-SS02	SW8240	1,1,2-TRICHLOROETHANE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS02	SW8240	1,1-DICHLOROETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS11-SS02	SW8240	1,1-DICHLOROETHENE	0.00	MG/KG	0.0007	U	
SS	SO-SS11-SS02	SW8270	1,2,4-TRICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	1,2-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8240	1,2-DICHLOROETHANE	0.00	MG/KG	0.0009	U	
SS	SO-SS11-SS02	SW8240	1,2-DICHLOROPROPANE	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS02	SW8270	1,3-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	1,4-DICHLOROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2,4,5-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2,4,6-TRICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2,4-DICHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2,4-DIMETHYLPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	2,4-DINITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	2,4-DINITROTOLUENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	2,6-DINITROTOLUENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8240	2-CHLOROETHYL VINYL ETHER	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS02	SW8270	2-CHLORONAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2-CHLOROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8240	2-HEXANONE	0.00	MG/KG	0.0040	U	
SS	SO-SS11-SS02	SW8270	2-METHYLNAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	2-NITROPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	3,3'-DICHLOROBENZIDINE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	3-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	MG/KG	0.2000	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS02	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	4-CHLOROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	MG/KG	0.4000	U	
SS	SO-SS11-SS02	SW8270	4-NITROANILINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	4-NITROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	ACENAPHTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	ACENAPHTHYLENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8240	ACETONE	0.00	MG/KG	0.0080	U	
SS	SO-SS11-SS02	SW8270	ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8240	BENZENE	0.00	MG/KG	0.0007	U	
SS	SO-SS11-SS02	SW8270	BENZO(a)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	BENZO(a)PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	BENZO(b)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	BENZO(g,h,i)PERYLENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	BENZO(k)FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	BENZOIC ACID	0.00	MG/KG	1.0000	U	
SS	SO-SS11-SS02	SW8270	BENZYL ALCOHOL	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	BENZYL BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8240	BROMODICHLOROMETHANE	0.00	MG/KG	0.0003	U	
SS	SO-SS11-SS02	SW8240	BROMOFORM	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS02	SW8240	BROMOMETHANE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS02	SW8240	CARBON DISULFIDE	0.00	MG/KG	0.0020	U	
SS	SO-SS11-SS02	SW8240	CARBON TETRACHLORIDE	0.00	MG/KG	0.0009	U	
SS	SO-SS11-SS02	SW8240	CHLOROBENZENE	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS02	SW8240	CHLOROETHANE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS02	SW8240	CHLOROFORM	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS02	SW8240	CHLOROMETHANE	0.00	MG/KG	0.0015	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS02	SW8270	CHRYSENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8240	cis-1,2-DICHLOROETHYLENE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS02	SW8240	cis-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0008	U	
SS	SO-SS11-SS02	SW8270	DI-n-BUTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	DI-n-OCTYL PHTHALATE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	DIBENZOFURAN	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8240	DIBROMOCHLOROMETHANE	0.00	MG/KG	0.0008	U	
SS	SO-SS11-SS02	AK102	DIESEL RANGE ORGANICS	1.70	MG/KG	1.0000	J	
SS	SO-SS11-SS02	SW8270	DIETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	DIMETHYL PHTHALATE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8240	ETHYLBENZENE	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS02	SW8270	FLUORANTHENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	FLUORENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	AK101	GASOLINE RANGE ORGANICS	0.00	MG/KG	0.0800	U	
SS	SO-SS11-SS02	SW8270	HEXACHLOROBENZENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	HEXACHLOROBUTADIENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	HEXACHLOROETHANE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	INDENO(1,2,3-c,d)PYRENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	ISOPHORONE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8240	METHYL ETHYL KETONE (2-BUTANONE)	0.00	MG/KG	0.0050	U	
SS	SO-SS11-SS02	SW8240	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	0.00	MG/KG	0.0020	U	
SS	SO-SS11-SS02	SW8240	METHYLENE CHLORIDE	0.00	MG/KG	0.0008	U	
SS	SO-SS11-SS02	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	N-NITROSODIPHENYLAMINE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	NAPHTHALENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	NITROBENZENE	0.00	MG/KG	0.2000	U	
SS	SO-SS11-SS02	SW8270	PENTACHLOROPHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	PHENANTHRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	PHENOL	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8270	PYRENE	0.00	MG/KG	0.1000	U	
SS	SO-SS11-SS02	SW8240	STYRENE	0.00	MG/KG	0.0015	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS02	SW8240	TETRACHLOROETHYLENE (PCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS02	SW8240	TOLUENE	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS02	SW8240	TOTAL XYLENES	0.00	MG/KG	0.0040	U	
SS	SO-SS11-SS02	SW8240	trans-1,2-DICHLOROETHENE	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS02	SW8240	trans-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0004	U	
SS	SO-SS11-SS02	SW8240	TRICHLOROETHYLENE (TCE)	0.00	MG/KG	0.0005	U	
SS	SO-SS11-SS02	SW8240	VINYL ACETATE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS02	SW8240	VINYL CHLORIDE	0.00	MG/KG	0.0010	U	
SS	SO-SS11-SS03	SW8240	1,1,1-TRICHLOROETHANE	0.00	MG/KG	0.0020	U	
SS	SO-SS11-SS03	SW8240	1,1,2,2-TETRACHLOROETHANE	0.00	MG/KG	0.0025	U	
SS	SO-SS11-SS03	SW8240	1,1,2-TRICHLOROETHANE	0.00	MG/KG	0.0027	U	
SS	SO-SS11-SS03	SW8240	1,1-DICHLOROETHANE	0.00	MG/KG	0.0007	U	
SS	SO-SS11-SS03	SW8240	1,1-DICHLOROETHENE	0.00	MG/KG	0.0020	U	
SS	SO-SS11-SS03	SW8270	1,2,4-TRICHLOROBENZENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	1,2-DICHLOROBENZENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8240	1,2-DICHLOROETHANE	0.00	MG/KG	0.0025	U	
SS	SO-SS11-SS03	SW8240	1,2-DICHLOROPROPANE	0.00	MG/KG	0.0017	U	
SS	SO-SS11-SS03	SW8270	1,3-DICHLOROBENZENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	1,4-DICHLOROBENZENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2,4,5-TRICHLOROPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2,4,6-TRICHLOROPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2,4-DICHLOROPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2,4-DIMETHYLPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2,4-DINITROPHENOL	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	2,4-DINITROTOLUENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	2,6-DINITROTOLUENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8240	2-CHLOROETHYL VINYL ETHER	0.00	MG/KG	0.0027	U	
SS	SO-SS11-SS03	SW8270	2-CHLORONAPHTHALENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2-CHLOROPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8240	2-HEXANONE	0.00	MG/KG	0.0080	U	
SS	SO-SS11-SS03	SW8270	2-METHYLNAPHTHALENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2-METHYLPHENOL (o-CRESOL)	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	2-NITROANILINE	0.00	MG/KG	50.0000	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS03	SW8270	2-NITROPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	3,3'-DICHLOROBENZIDINE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	3-NITROANILINE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	4,6-DINITRO-2-METHYLPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	4-BROMOPHENYL PHENYL ETHER	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	4-CHLORO-3-METHYLPHENOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	4-CHLOROANILINE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	4-CHLOROPHENYL PHENYL ETHER	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	4-METHYLPHENOL (p-CRESOL)	0.00	MG/KG	75.0000	U	
SS	SO-SS11-SS03	SW8270	4-NITROANILINE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	4-NITROPHENOL	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	ACENAPHTHENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	ACENAPHTHYLENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8240	ACETONE	0.04	MG/KG	0.0220	J	YY
SS	SO-SS11-SS03	SW8270	ANTHRACENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8240	BENZENE	0.00	MG/KG	0.0020	U	
SS	SO-SS11-SS03	SW8270	BENZO(a)ANTHRACENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	BENZO(a)PYRENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	BENZO(b)FLUORANTHENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	BENZO(g,h,i)PERYLENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	BENZO(k)FLUORANTHENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	BENZOIC ACID	0.00	MG/KG	200.0000	U	
SS	SO-SS11-SS03	SW8270	BENZYL ALCOHOL	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	BENZYL BUTYL PHTHALATE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	bis(2-CHLOROETHOXY) METHANE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	bis(2-CHLOROISOPROPYL) ETHER	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	bis(2-ETHYLHEXYL) PHTHALATE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8240	BROMODICHLOROMETHANE	0.00	MG/KG	0.0007	U	
SS	SO-SS11-SS03	SW8240	BROMOFORM	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS03	SW8240	BROMOMETHANE	0.00	MG/KG	0.0027	U	
SS	SO-SS11-SS03	SW8240	CARBON DISULFIDE	0.00	MG/KG	0.0050	U	
SS	SO-SS11-SS03	SW8240	CARBON TETRACHLORIDE	0.00	MG/KG	0.0025	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS03	SW8240	CHLOROBENZENE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS03	SW8240	CHLOROETHANE	0.00	MG/KG	0.0030	U	
SS	SO-SS11-SS03	SW8240	CHLOROFORM	0.00	MG/KG	0.0030	U	
SS	SO-SS11-SS03	SW8240	CHLOROMETHANE	0.00	MG/KG	0.0027	U	
SS	SO-SS11-SS03	SW8270	CHRYSENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8240	cis-1,2-DICHLOROETHYLENE	0.00	MG/KG	0.0030	U	
SS	SO-SS11-SS03	SW8240	cis-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0022	U	
SS	SO-SS11-SS03	SW8270	DI-n-BUTYL PHTHALATE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	DI-n-OCTYL PHTHALATE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	DIBENZ(a,h)ANTHRACENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	DIBENZOFURAN	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8240	DIBROMOCHLOROMETHANE	0.00	MG/KG	0.0022	U	
SS	SO-SS11-SS03	AK102	DIESEL RANGE ORGANICS	9300.00	MG/KG	2.5000		
SS	SO-SS11-SS03	SW8270	DIETHYL PHTHALATE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	DIMETHYL PHTHALATE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8240	ETHYLBENZENE	0.00	MG/KG	0.0017	U	
SS	SO-SS11-SS03	SW8270	FLUORANTHENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	FLUORENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	AK101	GASOLINE RANGE ORGANICS	4500.00	MG/KG	100.0000		
SS	SO-SS11-SS03	SW8270	HEXACHLOROBENZENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	HEXACHLOROBUTADIENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	HEXACHLOROCYCLOPENTADIENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	HEXACHLOROETHANE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	INDENO(1,2,3-c,d)PYRENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	ISOPHORONE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8240	METHYL ETHYL KETONE (2-BUTANONE)	0.00	MG/KG	0.0150	U	
SS	SO-SS11-SS03	SW8240	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	0.00	MG/KG	0.0050	U	
SS	SO-SS11-SS03	SW8240	METHYLENE CHLORIDE	0.00	MG/KG	0.0022	U	
SS	SO-SS11-SS03	SW8270	N-NITROSODI-n-PROPYLAMINE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	N-NITROSODIPHENYLAMINE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	NAPHTHALENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	NITROBENZENE	0.00	MG/KG	50.0000	U	
SS	SO-SS11-SS03	SW8270	PENTACHLOROPHENOL	0.00	MG/KG	25.0000	U	

TABLE E
Laboratory Results
Source Area SS11
Indian Mountain Long Range Radar Station

Matrix	Sample Identification	Test Method	Analyte	Value	Units	Detection Limit	Lab Qualifier	Ecological Risk
SS	SO-SS11-SS03	SW8270	PHENANTHRENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	PHENOL	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8270	PYRENE	0.00	MG/KG	25.0000	U	
SS	SO-SS11-SS03	SW8240	STYRENE	0.00	MG/KG	0.0027	U	
SS	SO-SS11-SS03	SW8240	TETRACHLOROETHYLENE (PCE)	0.00	MG/KG	0.0017	U	
SS	SO-SS11-SS03	SW8240	TOLUENE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS03	SW8240	TOTAL XYLENES	0.00	MG/KG	0.0080	U	
SS	SO-SS11-SS03	SW8240	trans-1,2-DICHLOROETHENE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS03	SW8240	trans-1,3-DICHLOROPROPENE	0.00	MG/KG	0.0015	U	
SS	SO-SS11-SS03	SW8240	TRICHLOROETHYLENE (TCE)	0.00	MG/KG	0.0017	U	
SS	SO-SS11-SS03	SW8240	VINYL ACETATE	0.00	MG/KG	0.0030	U	
SS	SO-SS11-SS03	SW8240	VINYL CHLORIDE	0.00	MG/KG	0.0030	U	
SS	SO-SS11-SS04	AK102	DIESEL RANGE ORGANICS	8600.00	MG/KG	450.0000		
SS	SO-SS11-SS04	AK101	GASOLINE RANGE ORGANICS	570.00	MG/KG	0.9000		
SS	SO-SS11-SS05	AK102	DIESEL RANGE ORGANICS	270.00	MG/KG	15.0000		
SS	SO-SS11-SS05	AK101	GASOLINE RANGE ORGANICS	0.00	MG/KG	0.0900	U	

Notes:

COPEC = Contaminant of Potential Ecological Concern

J = estimated

MG/KG = milligrams per kilogram

SS = surface soil

U = undetected (analyzed for but undetected)

YY = retained as an ecological COPEC

SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: SS11

LOC ID SS11-SS01

SAMPLE ID: SS-SS11-SS01

LOT CONTROL NO. IN-A1021

DATE: 08/13/95

TIME: 1630

WEATHER: S. Br^{SB} Overcast, 65°F

FIELD SAMPLING TEAM: S. Brown, P. Striebich

SAMPLING LOCATION:

SE of large fuel tank on runway road. 51.5' SW
of SS11-BH01 and 60.5' SW of SS11-BH02. Same location as
test kit sample TK02

COMPOSITE: YES ☒ NO ☐

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: .5 ft

VOLUME COLLECTED: 2 8 oz jars for
VOL, SVOL, DRO & GRC
analysis

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Real ~~wrong~~ - SS02
dark brown organic soil near surface and
grading into light brown silty soil, 10-20% small gravel

FIELD TEST KIT SCREENING TPH: X

PCB: _____

SAMPLE IDS:

RESULTS:

SS11- TK02	< 50, > 200
Detection limits : 50, 200 ppm GRC	
82, 330 ppm DRC	

DATE AND TIME OF
TEST KIT SCREENING 8/10/95 R. Henry

COMPLETED BY:

Sarah Brown
PRINT NAME

Sarah Brown
SIGNATURE

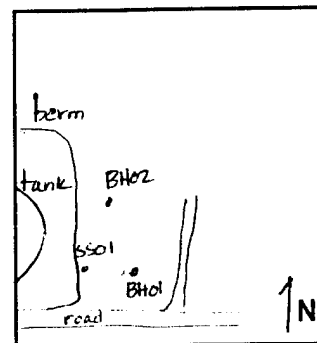
8/13/95
DATE

CHECKED BY:

PRINT NAME

SIGNATURE

DATE



SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: SS11

SAMPLE ID: SS11-402 LOT CONTROL NO. IN-A1022

DATE: 08/13/95 TIME: 1632

WEATHER: Overcast, 65°F

FIELD SAMPLING TEAM: S. Brown, P. Strickbich

SAMPLING LOCATION:

29' south of SS11-BH07 and 90.5' ESE of BH15,
on right side of opening in trees

COMPOSITE: YES ☒ NO ☐ COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: .5' VOLUME COLLECTED: 2-8 oz jars for
VOC, SVOC, DRD & GRD analysis

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Peat-dark brown organic soil near surface (to 3-4 in)
and grading into light brown silty soil. Some small
gravel - rounded

FIELD TEST KIT SCREENING TPH: X PCB: _____

SAMPLE IDS:	RESULTS:
SS11-T1408	> 50, < 200
Detection limits: 50, 200 ppm	GRD
82, 330 ppm	DRD

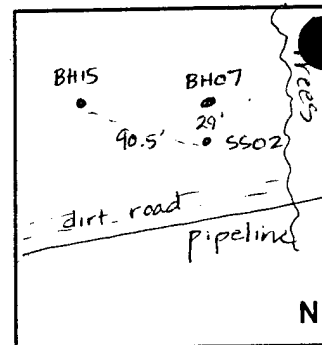
DATE AND TIME OF
TEST KIT SCREENING 08/13/95

COMPLETED BY:

Sarah Brown Sarah Brown 8/23/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE



SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: SS11

LOC. ID: SS11-SS03

SAMPLE ID: SS0-SS11-SS03

LOT CONTROL NO. IN-A1023

DATE: 08/13/95

TIME: 1635 1655 313

WEATHER: 65°F and cloudy

1635

FIELD SAMPLING TEAM: S. Brown, P. Strubich

SAMPLING LOCATION:

50' SW of location SS04, NE of SS05, Located
on left (west) side of treeless area

COMPOSITE: YES ☒ NO

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: .5'

VOLUME COLLECTED: 2-8 oz jars for
VOC, SVOC, DRO & GRO analysis

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Peat material, degrading grass and roots in dark brown
soil near surface and grading into medium brown
silty, gravelly soil by .5' bgs.

FIELD TEST KIT SCREENING TPH: X

PCB: _____

SAMPLE IDS:	RESULTS:
<u>SS11-TK09</u>	<u>not ^{SP} detected</u>
<u>detection limits: 50, 200 ppm GRO</u>	
<u>82, 330 ppm DRO</u>	

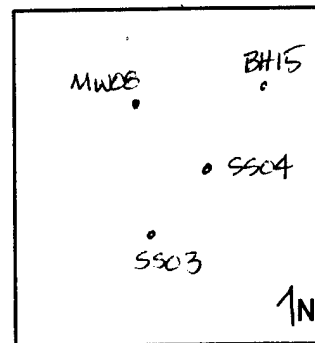
DATE AND TIME OF
TEST KIT SCREENING 8/13/95

COMPLETED BY:

Sarah Brown Sarah Brown 8/13/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE



SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: SS11 LOC ID: SS11-SS04

SAMPLE ID: SS0-SS11-SS04 LOT CONTROL NO. IN-A1024

DATE: 08/13/95 TIME: 1640

WEATHER: Overcast, 65°F

FIELD SAMPLING TEAM: S. Brown, P. Striebach

SAMPLING LOCATION:

In west/central area of treeless zone. 59' SE
of SS11-MW08 and 52.5' SW of SS11-BH15

COMPOSITE: YES/NO COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: .5' VOLUME COLLECTED: 2 8 oz jars
for DRC & GRC analysis

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Peat near surface and brown, silty, gravelly soils
below 3-4"

FIELD TEST KIT SCREENING TPH: X PCB: _____

SAMPLE IDS:		RESULTS:
<u>SS11-TK12</u>		<u>> 200</u>
<u>detection limits : 50, 200</u>		<u>ppm GRC</u>
<u>82, 330</u>		<u>ppm DRC</u>

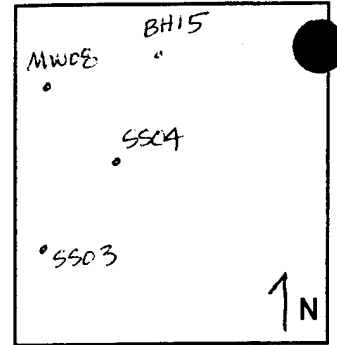
DATE AND TIME OF
TEST KIT SCREENING 8/13/95

COMPLETED BY:

Sarah Brown Sarah Brown 8/13/95
PRINT NAME SIGNATURE DATE

CHECKED BY:

PRINT NAME SIGNATURE DATE



SURFACE AND SUBSURFACE SOIL SAMPLING FIELD DATA FORM

PROJECT NAME: INDIAN MOUNTAIN LRRS

PROJECT NUMBER: 05G46200

SITE ID: SS11

LOC ID: SS11-SS05

SAMPLE ID: SO-SS11-SS05

LOT CONTROL NO. IN-A1025

DATE: 8/13/95

TIME: 1645

WEATHER: 65°F and ^{SB}cloudy

FIELD SAMPLING TEAM: S. Brown, P. Strubich

SAMPLING LOCATION:

In the wooded area on the west side of the
treeless zone. 101' SSW of SS11. MW08

COMPOSITE: YES ~~NO~~

COMPOSITE DESCRIPTION: _____

DEPTH OF SAMPLING INTERVAL: .5'

VOLUME COLLECTED: 2 Eco jars for
GRO and DRO analysis

HEADSPACE READINGS: _____

DESCRIPTION OF SOIL MATERIALS:

Peat and light to medium brown, silty, gravelly
soils.

FIELD TEST KIT SCREENING TPH: X

PCB: _____

SAMPLE IDS:

RESULTS:

SS11 - TK11	> 2000
Detection limits: 50, 200 ppm GRO	& 82, 330 ppm DRO

DATE AND TIME OF
TEST KIT SCREENING 8/13/95

COMPLETED BY:

Sarah Brown

Sarah Brown

8/13/95

PRINT NAME

SIGNATURE

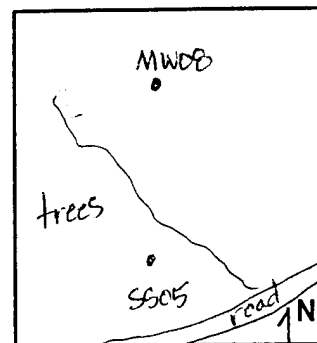
DATE

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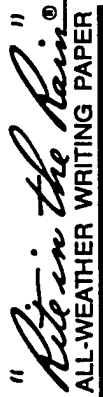
PRINT NAME

SIGNATURE

DATE



APPENDIX F
FIELD LOGS



Name Sarah Brown

Address _____

Phone _____

Project _____

Yellow Polyethylene Protective Slipcovers (Item #31) are available for this style of notebook. Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

PAGE	REFERENCE	DATE
	Indian Mountain LRRS	Aug 1995
	IRA - Diversion Ditch	
	TSR - Containment Cell	
	Additional Source Area	
	Characterization: SS02,	
	OT08, SS09, SS10, SS11	

8/8/95

0700 HES meeting with Wilder, Ben,
Bill, & Kyle. Given by Bob Ikerry
0800 Down to shed to clean IDW sampling
equipment

0915 Calibrate HNU, Hw-101 #313E 10.2 eV probe
using 100 ppm isobutylene 1st 42692

0920 Span 5.4E 100 ppm
Background 1 ppm at 10W drum #26
degraded fuel odor, no hit on HNU
Collected ss-10W-DE26. Dark gray,
silty, & moist because there was
1-2 feet of water standing in
drum. Collected 2 8oz & 2 4oz
for TCLP, metals and VOC analyses.
Metals & VOC results will be requested
for quick-turn so that we can
determine if soils/liquid should
go into containment cell or into
the landfill.

0930 HNU at Drum 32 is background
.5-1 ppm. Collected 2 8oz and
2 4oz jars for TCLP and

8/8/95 cont.

quick-turn metals and VOCs analyses.
1000 went up to dome and met with
Joe Burch from GII/surveyor to talk
about our surveying needs.

1140 Collected ss02-ss01, a surface soil sample
Location is 4' west of ss02-BH04
1149 Collected ss0-ss02-ss02. 6-7' east
of ss02-BH06.

1201 Collected ss0-ss02-ss03, 50'± NW
of percolation test pipe
1210 Collected ss0-ss02-ss04, 71' west
of roadway ditch

1349 Measure water level in
SS09-MW03

WL = 7.98' BTC DKJ = 0 ppm
TD = 10.15' BTC
Note: 8 ppm in casing; 1-2 ppm
in breathing zone. No S-Holston
observed in bottom of well

1354 Measure water level in SS09-MW04
WL = 7.44' BTC
TD = 8.00' BTC

Note: 3.5 ppm in casing; 0-1 ppm
in breathing zone

1407 Measure water level in SS09-MW01
WL = 7.26' BTC
TD = 10.16'

Note: 1.3 ppm in well casing; 1-2 ppm
in breathing zone

8/8/95 cont.

1417 Measure water level in S309 MW02

WL = 6.11 B7C

TD = 10.14' B7C

Note: O PPM in casing 17.30'
1430 ▽ in water supply well 17.30'

SB

8/8/95

8/9/95

S. Brown

0700 Met with Wilker crew to discuss plans for day.

0800 Bob Henry and I prepared a made water level measurements

in S309 wells and the water supply well.

0930 Prepared to collect OTOB test pit samples

1000 Rode up with Rick Neff - station

chief. We walked up and down some of the surface utility lines

at OTOB. Ben Northrup & Kyle arrived w/backhoe

1130 Started digging test pits at OTOB. The goal is to define vertical and horizontal extent of PCB contamination using immunoassay test kits

1145 Collected 3 samples from 1994 location S305: 1 at the surface,

1 at 2.5' bgs, and a 3rd 5 ft bgs

Groundwater started flowing in at 2-2.5 ft bgs.

Backfilled hole

1215 Collected samples at 0-6", 2.5', and 5' at 1994 location S301.

SB

8/9/95

8/9/95 S Brown

Backfilled SBO1. Water at 2.5' bgs.
Bob Henry, Samer Kurmi, Patricia
Striebach, Joe Burch (611 CES Surveyor),
and Joe's 2 helpers arrive.

Collect 3 test kit samples at 0-6",
2.5', and 5' at 1994 location SBO2.
Water/bedrock at ~~2.5'~~^{SB} 6" bgs. Water
level was 2.5' bgs in SBO1.
Soil in SBO2 is darker than others
and smells strongly of fuel.

Backfilled SBO2 and started pit
location New1. Collected test kit
samples at 0-6", 2.5', and 5' bgs.
Water was at 5-6". Kyle thought
that he was hitting bedrock. Soil from
3' down was fuel saturated.

Excavated test pit New2. Samples
collected at 0-6", 2.5', and 5' bgs
for PCB test kit analysis. No water
in pit although water was ponded
on the surface before excavation.
Permafrost was encountered at
5' bgs.

SB 8/9/95

8/9/95

S. Brown
pit elevations from Joe Burch
611 CES

SBO1 4001.43
SSO5 3999.97
SBO2 3998.23
new1 3795.23
new2 4001.56

approx.
scale 1" = 45'

Pit

new2

SSO5

SBO1

new1

SBO2

Test Kit Results - performed 8-10pm		
	2.5' depth	5' depth
SBO1	> 40 ppm	NA
SSO5	> 10, < 40	ND
SBO2	> 40	> 40
new1	SB-1 ND	NA
new2	ND	NA
ND = not detected NA = not analyzed		

8/9/95 SB

1340

S. Brown 8/9/95

Drove up mtn. to look for locations of previous (1994) PCP hits. Samer, Patricia, and I found and sampled 2 seeps along the last switchback to analyze using PCP immunoassay test kits made by Ensys. A third location NE of TPI2 (1994) on the lower bench was sampled and finally, the 1994 sweat (SS10) location was sampled.

1400

We met up with the others and decided to return to Lower Camp, packed up, & left.

1500

Back at Lower Camp.

Analyzed PCB samples

2300

Quit for day.

~~SB 8/9/95~~

8/10/95 S. Brown

Groundwater levels

1610	W661	9.01'
1611	T in River	1.65'
1616	SS09-MU02	6.16'
1620	SS09-MU01	7.31'
1624	SS09-MU03	8.1'
1629	SS09-MU04	7.51'

Other activities for today:

PCB and PCP test kit analysis, discussions about OT08 utility, clearance, and discussions about sampling approach for OT08 and PCP locations at SDO1 and SS10.

I also calibrated the HNU this morning: Span 5.40 at 100ppm 150-butylene. HNU # 3138 from Hazeo w/a 10.2 eV probe.

~~SB 8/10/95~~

8/11/95 S. Brown OTOB

0945

Arrived at OTOB. Kyle Beatty and Bill Davidson from Wilder are here. Rick Neff, the Ind. Mtn station chief has just completed a final verification that lines leading underground at OTOB are not live. We are going to mark proposed test pit locations. PCB test kit and laboratory samples will be collected. The lab samples will be analyzed for ^{SB} PCBs by EPA method 8270. Kit ^{4.5-5} and ^{5.5-5} samples will be collected at 5-1.0, 2.5-3 ft. Excavate first pit. Three test kit and one lab sample were collected. ~~SB~~ Lab sample ID is 50-OTOB-SSOB, a surface soil sample. Test kit samples are SSOB-01, 02, and 03. The location is approx. 50 ft. ^{SB} of core marker. Subsurface material is fine-grained silty soil, dry, with gravel and angular boulders. Water slowly filled the pit after a depth of 5' was reached.

SB 8/11/95

8/11/95

S. Brown OTOB

1045 Collected samples in next pit.

50-OTOB-SB03, a lab sample from a depth of 4.5-5.0 ft. Test kit samples collected were SSOB-01, 02, 03. Soil was very moist and smelled of degraded fuel. Soil is silty/clayey with gravel and boulders. Water trickled in about 1' bgs.

^{SB} 1221 R. Henry, P. Strubich, and S. Karmi arrived at OTOB.

1221 Dig 3rd pit. Lab samples collected from 0.5-1.0' and 2.5-3.0'; 50-OTOB-SS10 and 50-OTOB-SB04. Test kit samples are SS10-01, 02, and 03. Permafrost and weathered bedrock were encountered at 5' bgs. No significant water seepage. Location is on the south side of OTOB.

1247 Excavate next pit near 1994 location P4. 50-OTOB-SB05. Test kit samples SS11-01, 02, and 03. Sample collected at 1250. Soil was similar to other pits and ice crystals were present in the fractured bedrock at 5' bgs. Lab sample collected from 2.5-3.0' bgs.

SB 8/11/95

S. Brown OT08 08/11/95

1310 Soil was dry until 4.5' bgs.
Collected samples from next pit excavated on the north side of OT08.
Lab sample from 0.5-1.0' bgs. -
SO-OT08-SS11²⁵⁰. Test kit samples (construction)
~~SS11~~^{SB} SS12-01~~250~~ Debris was encountered at 2.0' bgs and hole was backfilled.

1326 Collect a 0.5-1.0' lab sample from 6th pit located between 1994 locations P01 and P04; SO-OT08-SS13.
A lab sample was also collected at 2.5-3.0' bgs; SO-OT08-SB06¹³³².
Soil was similar to other locations with heavy fuel odor and sheen on soil. Water was encountered at approx 4.0' bgs.

1400 After marking proposed diversion ditch location, returned to Lower Camp to analyze test kit samples.

SB 08/11/95

S. Brown 08/11/95 OT08

Test Kit	Results	ND = none detected NA = not analyzed
SS08-01	ND	ND 8/12/95 SB
SS08-02	NA	
SS08-03	NA	
SS09-01	>1, <10 ppm PCB	
SS09-02	ND	SB 8/12/95
SS09-03	NA	
SS10-01	ND	
SS10-02	ND	
SS10-03	ND	
SS11-01	>1, <10 ppm PCB	
SS11-02	ND	
SS11-03	NA	
SS12-01	ND	
SS12-02	NA	
SS12-03	NA	
SS13-01	ND	
SS13-02	ND	
SS13-03	NA	

Detection limit is 1 ppm PCB

not collected

SP

8/12/95 S. Brown

1995 P. Strubich & I put in the permanent stakes and surveyed them

Cap #	Sample ID	Elev	X Y
20	SS10	3.6	264
checkpt	COR4	.74	256.5
16	SS10	4.50	193
5	SB01	7.25	132
2	SS08	12.71	144
11	new11	12.31	93
10	SB02	9.9	87.5
4	SS09	13.9	80
12	SS05	8.5	51.5
13	SS12	7.1	28
17	SS13	2.82	352
18	new2	6.5	7

1300 Patricia and I are at SS10 collecting PCP test kit samples

1315 Collected water at SD01-SW04 or 5

A water sample was not collected here last year bc no flow. We did collect sediment.

8/12/95 S. Brown

1340 Collected a surface water sample from what I think is the 1994 location SS10-SW02.

1350 Collected a surface water sample at 1994 location SD01-SW09

1415 Collected a surface water sample from 1994 location SD01-SW07.

1430 P. Strubich & I returned to Lower Camp. I analyzed PCB and PCP samples. PCB samples included 4 samples collected from soils removed from the ditch in the 100' - 150' ~~SS08~~ area, and 3 2.5-3' bgs samples from 8/14/95 test pits.

SB

8/13/95 S. Brown

Ran TPH test kits from the diversion ditch spoils. All samples were >200 ppm GRO & 330 ppm DRO.

1300 P. Strubich & I are going to SS11 to collect lab samples. Five will be collected for GRO & DRO analyses, 3 of these will also be analyzed for VOCs & SVOCs (SS01, SS02, SS03) ^{SB 8/13/95}

1310 Collected SO-SS11-SS01 SE of large fuel tank at ^{exterior} base of berm. 51.5' SW of SS11-BH01 and 60.5' SW of SS11-BH02.

1325 Collected SO-SS11-SS02, 29' South of SS11-BH07 and 90.5' ESE of BH15

1335 Collected SO-SS11-SS04. 59' SE of SS11-MW01, 52.5' SW of BH15. ^{SB 8/13/95}

1355 Collected SS11-SS03. 50.5' SW

SB

08/13/95

S. Brown

of SS04.

1410 Collected SS05, SO-SS11-SS05 101' SW of SS11-MW02

These locations correspond to the following TPH test kit sampling locations from 8/10/95

SS01	TK02	PPM GRO
SS02	TK08	<50, >200 ?
SS03	TK09	<50, >200 ?
SS04	TK12	not detected
SS05	TK11	>200 ppm

1500 Assembled the thermocouple purchased for soil temperature measurements at the containment cell. An Omega

K-type probe with a digital thermometer. Stock #s TJ144-CAS-18U-12 and 450-AKT
Also calibrated the Gastech CO₂/O₂ meter - ^{SB} #32520X - rented from Environmental Instruments.

Labelled SS11 samples and completed COCs.

1700 Arrived at containment cell to make CO₂/O₂ measurement,

SB

08/13/95 S. Brown

temperature measurement, and to collect composite samples for GPO/DEO test kit (TPH) and lab analysis and normal samples for nutrient analysis. The latter samples were collected from areas that appeared to contain fuel contamination. ^{invalid - see p. 21} SB 8/14/95
Removed cover and measured a soil temp of 26.1°C which was relatively consistent throughout pile. CO₂ concentration was 0.80%, and O₂ was 21%.
Using a stainless steel spoon and a stainless steel hand auger, soils were collected, placed in a stainless steel bowl, stirred or homogenized and used to fill jars for lab analysis, and a small amount 20g, was collected for TPH test kit analysis.
Filled jar for sample SO-CCO1-ES01
Filled jar for sample SO-CCO1-ES02

SB

1710
1715

19

08/13/95 S. Brown

1720 Filled jar for sample SO-CCO1-ES03.
1725 Using a spoon, collected soil directly from the pile for nutrient analysis.
SO-CCO1-ES04
1727 Collected nutrient sample SO-CCO1-ES05.
1730 Collected nutrient sample SO-CCO1-ES05. Samples ES01 → ES03 will be analyzed for GPO/DEO. Nutrient analyses include: TN, nitrate, total phosphorus, alkalinity, and total iron.
17 Henry collected PCP water samples from 3 source ^{SB} areas SS10 scups and also collected geotechnical analysis soil samples from source area OTCE. He and I stayed up late to label samples, complete CCCs, and package samples

SB

0600 08/14/95

S. Brown

Left for Top Camp to sample the prefabricated well installed in the ORE diversion ditch. P. Strubich has come with me. P. Henry to look at the finished ditch. The weather is cold (40°F), windy, and wet. Bob drives the well 6-7 times before we have collected enough water for VCC, SVCC, DRD, and GRO analyses. The sample ID is ~~WG-SS10~~ WG-SS10-WG01; sample time is 0725 (VCC), 0727 (SVCC), and 0730 (DRD/GRO).

We arrive at Lower Camp. I finish prepping yesterday's samples for shipment.

Warbelow's arrives - takes samples (2 coolers) and P. Strubich. Warbelow's has^{not} brought the cover material for the containment cell. Bob, me, Samner, Kyle, and Bill fill sandbags and begin packing the truck.

SB

08/14/95

S. Brown

21

and finishing backhoe tasks before the Here comes at 3pm to take Kyle, the truck, backhoe, and ATV.

I took some final readings of the soil pile. It turns out that the thermocouple was not hooked up correctly yesterday. The temp of the soil is 57.8°F, the ambient temp is 54°F. The O₂ concentration is 21%, and CO₂ 0.7%. I packed up these instruments so Kyle could take them on the Here.

1400 The Here won't be coming today. We get prepared to sample the SSCQ monitoring wells and the water supply well. Decontaminated all sampling equipment and went to SSCQ with R. Henry & S. Karmi.

1520 Arrive at SSCQ - MWE3. For SSQ D is 7.44 ft. Begin purging, considered dry at 1553 after 15 gallons have been removed.

SB

22

S. Brown CE/14/15

1601

▽ at SSCQ-MW01 ^{6.87} ~~5.45~~ ft.
 Begin purging; dry at 1634
 after removing 1.5 gallons.

1641

Begin purging SSCQ-MW02.
 ▽ initially 5.45 ft.

1653

purged dry, 6 gallons removed

Dinner

1803

Begin sampling SSCQ-MW02.

Sample WG-SSCQ-MW02-OZ.

Analyses: VOC, SVOC, DRD/GRO

1815

Sample WG-SSCQ-MW03-OZ.

collected. Also for VOC, SVOC, DRD/GRO

1827

Collect sample WG-SSCQ-MW04-OZ.

Analyses: VOC, SVOC, GRO/DRD.

Decen bailers

1924

Begin purging SSCQ-MW01 Well

is dry at 1942 after removing

4 gallons

1952. Go to water supply well (WG01)

1958

Collect WG-SSCQ-WG01-OZ.

This well, a 2.5-3' corrugated

S.B.

CE/14/15

S. Brown

23

steel pipe, was not purged before
 sample collection. This sample will
 be analyzed for VOC, SVOC, DRD/GRO.
 2019 Collect sample WG-SSCQ-MW01-OZ.

1. prepared the ditch samples
 for shipment, will finish well
 samples tomorrow

S.B.

CE/14/15

08/15/95

Finished prepping remaining well (SSCH) samples. Packaged samples and supplies for shipment. Organized project property to be left in maintenance shed.

1 carbon filter drum

hexane

methanol

table/chair

type III water

water treatment unit piping

Updated paperwork.

Took off with backhoe, truck, and Bill from Wikler on the Southern Air flight.

SF

08/15/95



"Life in the Rain®"

ALL-WEATHER

MINING TRANSIT

Notebook No. 321

Book 1/

Indian Mountain LRS
August 1995
IRA Field Activities
R. Henry

Daily Log (Start)

15¹⁰ Arrive at Indian Mountain.
 - R. Henry, S. Brown (Sedimentologist),
 - B. H. Smith, K. B. Smith, B. Davis (Geologist)

Meet with Rick, Station Chief
 to discuss the check in

16⁴⁰ Begin setting up packing
 equipment

17²⁰ Break for lunch

17⁵⁰ Engine crew does drive
 around of area

- At upper camp to check out
 possible locations for trench

Note that utility line were
 observed in the area of the trench.

Will need to have the station
 personnel check character of the

- Relocate surface of the trench
 from pit to surface

8/8/65

0700 Preform H-174 & S-17

0750 H-174 bearing complete

-Dip out for drum storage area
0800 Direct Wilder to move
clean drums to land fill Alote
that S. Brown & R. Henry
marked all clean drums with

pink spray paint on 8/7/65.

0822 Preform to sample Faw drums
-Alote on sampling will be
kept in log book maintained
by S. Brown.

1420 W.Y.J. has finished
moving clean soil drums to landfill
-Preform to construct soil containment
cell

Alote: spoke with George
(Fm station person) regarding
location. He said that we
will have to move location from
proposed area, approximately 75'
to the west.

1600 Area has been banded to begin
placing liner material. Material
is XR-5 as specified. In
review of drums, some of the
contaminated drums are not full.
Therefore, we may need to
reduce the size of the
cell.

1700 Drink Faw bins.

1800 Drums placed into

1801 - Dump Drum # 25

1811 - Dump Drum # 17

1814 - Dump Drum # 11

1818 Dump Drum #

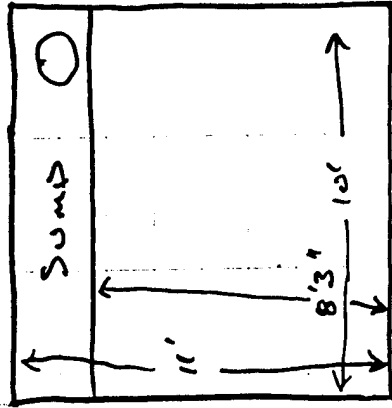
1832 - Revision size of piping
structure due to estimate of
soil amount: size 5' x 7'0"
by 4'3"

2000 8'3" - 11'

10'

1906 Dump Drum # 24
- 7 PM a drum 0-1 in BZ

↑ N
↓ N



1912 Dump Drum #4
12 ppm in drum; 12A on O-1 & B2

1919 Dump Drum #25
20 ppm in drum; 3.4 in B2

1923 Dump Drum #13
1-2 ppm in drum

1928 Dump Drum #3
1-2 ppm

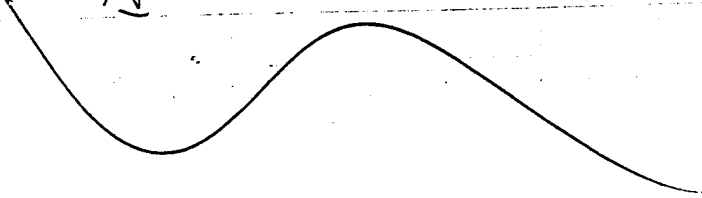
1931 Dump Drum #15

1940 - All contaminated soil has been placed in unit - total volume ≈ 2753 .
- Need to readjust size of unit to accommodate soil in unit

- Note: Due to Burch Wilds survey the final locations; also final dimensions will be measured

2017 - Cleanup had to Done
2215 Disposal activities for treatment of Wilds

12.5 ft
8/8/55



8/4/45

0715 meet w/ Gen & continue
excavations

0750 Power smelter (S02, H2S) for
shipment

0832 Prepare to move water tanks
at S02

0914 Water tanks complete. Travel
to land fill to check on progress
of Wilder who is emptying and
cleaning other drums

0927 Check on progress Wilder,
there are some empty drums
1000 Wilder personnel Murphy &

Betty take Buckhoe to upper
camp. to dig test pits. S. Brown
travel to upper camp with Rick
Neff to do utility tests.
W. Yoder explorer Davidson continues
decontaminating S-1 drums at
the landfill.

S. Kemi & P. Strickbach to arrive
at approx. 1015.

1015 Sam Kemi & Patricia Strickbach

1234.

Arrived Top Camp with
Sam, Patricia & his crew.
Met w/ Rick

1320 Collect samples from test pit
N02. Three samples collected.

Core @ 0.6 to 1 ft bys
@ 2.5-3 ft bys
@ 5 ft bys
For test pit analysis

Permafrost detected @ ≈ 6 ft
bys

- Crew starting to determine where
underground lines are located
- unable to determine electrical line
distinction - separate Upper camp
for lower camp.

1520 Arrive at lower camp
- direct will be to continue
cleaning drums at landfill.

- Ricky gives S. Kemi & P. Strickbach
tour of lower camp.

03. Brown set up to run test
kettle

1700 Break for dinner
Markis on duty check provided
by Joe Borch; see opposite page

8/7/95

Survey Data 0708

RCA #4

10 = Sew corner dike pond

10, 11, 12, 14 corner of pond

14 = 7 ft angle iron post ground

SR01 4001.43

SR05 3999.97

SR02 3998.23

NA01 3995.23

NA02 4001.56

Seize 6/1/95

From Birn

8/10/95

Even Morning meeting : discuss today's

activities including

- Decom of dirty suits done

- they will be decontaminated the

dirty things at the old decon

ponds. will have the decon

process. will be passed thru

the decontamination unit

- Test pits at upper camp

- Sarah from Higgins results

of past 475 samples. we will

find 10 more additional samples

to be collected basin in field

observed. Also we will take more and

previous sample bags of data.

- Patrick will be contacted after

activity is completed.

1030 Ben Anthony (wilder) at site.

- Sarah has finished running

PCB test kits - prep to move to

top camp to conduct test and test

k + PCB samples. Rick Nord is

at Top camp to do utility work

1411 at SS11 w/ Sam Kuni; to

collect test kit samples

Will collect 8 samples, analyze them and then collect 4 more.

These data will direct the

placement of lab samples.

1415 collect Test kit sample SS4 TK01 collect) as on map in work plan

- Sam Kuni collects sample

1424 collect Sample SS4 TK02

- Sam Kuni collects location on work plan map

1443 collect TK03

1458 Set up Test kit samples 6/8

at location designating of sediment sample when kit was inserted in 94.

1516 Draft SS11 - 8 samples collected.

- will analyze using test kits

1530 Begin analysis of Test kit samples from SS11. Will be by 1530 setting up the decon pad & elect treatment unit.

1705 Finish first for samples

- S. Bunk S. Kuni taken out - 1415 at SS4 TK01 - 1415

Wednesday 12/10/15

1610 Waco 7:00

1611 R. 1:05

1616 M. 6:16

1620 M. 7:31

1624 M. 8:10

1629 M. 7:51

1715 Bunk S. - 1:00

1805 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00

1830 R. 1:00 - 1:00



8/2/95

0800 Pipem 10 ft to the end
1000 Again to top cut, pipe to
clutter with using a pan. then
cluttered by pump - water - 11 bc
directed to the north

- South Branch of Potomac Station will
work on Surveying 0808 1000 hours

1538 Excavation has proceeded 72.5
ft beyond the 119 pit installed by
soil contamination observed under
last 28 ft of trench at this
point, we excavated buried building
debris

1558 Pipe suspended. Spies
as follows, John - check lab -
V-pick Series 5' section of 2' section
Sonsampur

Sump dug in trench at 131' from
end of trench. Bottom Sump
placed on well - 1 ft in depth.
V-pack series 5' in a 10 ft. 2' section
of 5 ft. 10 PUL attached. will
cut to top according to a 10
1' section is back filled

Survey from 117' to end of Ditch
 Distance Cond. G. Elev. Bott. Elev.
 COR #41 186.5° 11.05
 COR #4 288° 1.16
 117' 370 6.40 10.82^{4.12}
 Well 131' 42°
~~217' 57' 146' 520 7.96~~

Need to tie these two points
 117' & 131' to above benchmarks

COR #4 Cannot read.

COR #1	313°	1.46	
146'	145.5°	3.48	8.90 ^{5.42}
161'	153.5°	4.80	9.64 ^{4.64}
175'	162°	4.46	9.92 ^{5.46}
188'	169	4.12	10.06 ^{5.44}

199 - End of Ditch

Ave d.t. & ditch = 4.75 ft

8/13/95

0911 At top Camp can find book filling
 ditch. Prepare sample bottles.

Sample to collect today include

DT08 - geotech samples - Need 3

SS10 - PCP from Sumps - need 3

RTX - Ditch sample

Need bailer, bailer line

1229 Collect Geotech Sample 50'

South (toward Alaska) cut

SB01 sample location collected
 at 6" bgs.

1321 Prepare to collect PCP

Sample # SS10-SW10 from seep basin
 on north side of top camp. North of

old tank area. MSD3 sample collected

at this location. Previous 1994 location
 was SW-04

1329 Sample SW-10 + MSMSD collected.

1344 Collect SW-11 at Northwest
 side of top camp.

1400 Collect sample SW-12 near road
 on south side of mountain

1501 Cut off 7.78 ft from pole
 stubbed - previous try

5-48 Depot - App Camp

